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Automated Report

Technical Report for

APTIM

TCWTS; Coupeville, WA

501207

SGS Job Number: FA66397

Sampling Date: 07/25/19

Report to:

APTIM

natasha.sullivan@aptim.com

ATTN: Natasha Sullivan

Total number of pages in report: 87



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.

A handwritten signature in black ink that reads "Caitlin Brice".

Caitlin Brice, M.S.
General Manager

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Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(F1002), NY(12022), SC(96038001)
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Test results relate only to samples analyzed.

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Sample Summary

APTIM**Job No: FA66397****TCWTS; Coupeville, WA
Project No: 501207**

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA66397-1	07/25/19	11:35 MB	07/26/19	DW	Drinking Water FB	WI-CV-FCWTP-FB-INF200-072519
FA66397-2	07/25/19	11:37 MB	07/26/19	DW	Drinking Water	WI-CV-FCWTP-INF200-072519
FA66397-3	07/25/19	11:45 MB	07/26/19	DW	Drinking Water	WI-CV-FCWTP-MP205-072519
FA66397-4	07/25/19	11:46 MB	07/26/19	DW	Drinking Water FB	WI-CV-FCWTP-FB-205-072519
FA66397-5	07/25/19	11:50 MB	07/26/19	DW	Drinking Water	WI-CV-FCWTP-EF209-072519
FA66397-6	07/25/19	11:52 MB	07/26/19	DW	Drinking Water FB	WI-CV-FCWTP-FB-209-072519
FA66397-7	07/25/19	12:00 MB	07/26/19	DW	Drinking Water FB	WI-CV-FCWTP-FB-INF001-072519
FA66397-8	07/25/19	12:03 MB	07/26/19	DW	Drinking Water	WI-CV-FCWTP-INF001-072519
FA66397-9	07/25/19	12:03 MB	07/26/19	DW	Drinking Water	WI-CV-FCWTP-INF001P-072519
FA66397-10	07/25/19	12:09 MB	07/26/19	DW	Drinking Water FB	WI-CV-FCWTP-FB-EF002-072519
FA66397-11	07/25/19	12:10 MB	07/26/19	DW	Drinking Water	WI-CV-FCWTP-EF002-072519
FA66397-11D	07/25/19	12:10 MB	07/26/19	DW	Drinking Water Dup.	WI-CV-FCWTP-EF002-072519
FA66397-11S	07/25/19	12:10 MB	07/26/19	DW	Drinking Water MS	WI-CV-FCWTP-EF002-072519

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: APTIM

Job No: FA66397

Site: TCWTS; Coupeville, WA

Report Date 8/14/2019 7:17:36 PM

6 Samples and 5 Field Blanks were collected on 07/25/2019 and were received at SGS North America Inc - Orlando on 07/26/2019 properly preserved, at 3.4 Deg. C and intact. These Samples received an SGS Orlando job number of FA66397. 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 537.1 REV 1.0

Matrix: DW

Batch ID: OP76240

All 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) FA66397-11MS, FA66397-11MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Perfluorotetradecanoic acid are outside control limits.

OP76240-BS for Perfluorotetradecanoic acid: Outside control limits.

Matrix Spike Recovery(s) for 11Cl-PF3OUdS (F-53B Minor), Perfluorotetradecanoic acid, Perfluorotridecanoic acid are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 11Cl-PF3OUdS (F-53B Minor), Perfluorotetradecanoic acid, Perfluorotridecanoic acid are outside control limits. Probable cause is due to matrix interference.

Sample(s) FA66397-2 have surrogates outside control limits.

FA66397-1 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-2 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-3 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-4 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-5 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-6 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-7 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-8 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-9 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-10 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

FA66397-11 for Perfluorotetradecanoic acid: Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

Matrix: DW

Batch ID: OP76285

The following samples were extracted outside of holding time for method EPA 537.1 REV 1.0: FA66397-11, FA66397-2, FA66397-4, FA66397-8, FA66397-9

FA66397-2: Confirmation run.

FA66397-4: Confirmation run.

FA66397-8: Confirmation run.

FA66397-9: Confirmation run.

FA66397-11: Confirmation run.

Matrix: DW

Batch ID: OP76319

The following samples were extracted outside of holding time for method EPA 537.1 REV 1.0: FA66397-1, FA66397-10, FA66397-3, FA66397-5, FA66397-6, FA66397-7

FA66397-1: Confirmation run.

FA66397-3: Confirmation run.

FA66397-5: Confirmation run.

FA66397-6: Confirmation run.

FA66397-7: Confirmation run.

FA66397-10: Confirmation run.

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:

Ariel Hartney, Client Services (*Signature on File*)

Summary of Hits

Job Number: FA66397
Account: APTIM
Project: TCWTS; Coupeville, WA
Collected: 07/25/19



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FA66397-1 WI-CV-FCWTP-FB-INF200-072519

No hits reported in this sample.

FA66397-2 WI-CV-FCWTP-INF200-072519

Perfluorohexanoic acid	27.9	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	8.60	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	46.2	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	15.1	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	56.4	4.0	2.0	ng/l	EPA 537.1 REV 1.0

FA66397-3 WI-CV-FCWTP-MP205-072519

No hits reported in this sample.

FA66397-4 WI-CV-FCWTP-FB-205-072519

No hits reported in this sample.

FA66397-5 WI-CV-FCWTP-EF209-072519

No hits reported in this sample.

FA66397-6 WI-CV-FCWTP-FB-209-072519

No hits reported in this sample.

FA66397-7 WI-CV-FCWTP-FB-INF001-072519

No hits reported in this sample.

FA66397-8 WI-CV-FCWTP-INF001-072519

Perfluorohexanoic acid	28.5	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	8.73	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	51.0	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluorobutanesulfonic acid	13.5	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluorohexanesulfonic acid	50.0	4.0	2.0	ng/l	EPA 537.1 REV 1.0

FA66397-9 WI-CV-FCWTP-INF001P-072519

Perfluorohexanoic acid	28.9	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluoroheptanoic acid	8.91	4.0	2.0	ng/l	EPA 537.1 REV 1.0
Perfluorooctanoic acid	51.6	4.0	2.0	ng/l	EPA 537.1 REV 1.0

Summary of Hits

Job Number: FA66397
Account: APTIM
Project: TCWTS; Coupeville, WA
Collected: 07/25/19



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
		14.1	4.0	2.0	ng/l	EPA 537.1 REV 1.0
		52.0	4.0	2.0	ng/l	EPA 537.1 REV 1.0

FA66397-10 **WI-CV-FCWTP-FB-EF002-072519**

No hits reported in this sample.

FA66397-11 **WI-CV-FCWTP-EF002-072519**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-INF200-072519		
Lab Sample ID:	FA66397-1	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water FB	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7001.D	1	08/07/19 16:45	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	3Q7250.D	1	08/13/19 14:52	NAF	08/12/19 07:30	OP76319	S3Q147

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	105%	111%	70-130%
	13C2-PFDA	109%	104%	70-130%
	d5-EtFOSAA	94%	88%	70-130%
	13C3-HFPO-DA	111%	101%	70-130%

U = Not detected LOD = Limit of Detection
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

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-INF200-072519		
Lab Sample ID:	FA66397-1	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water FB	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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(a) Confirmation run.

(b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected LOD = Limit of Detection
 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

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-INF200-072519		
Lab Sample ID:	FA66397-2	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7002.D	1	08/07/19 17:01	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	Q62303.D	1	08/13/19 12:17	NAF	08/09/19 12:30	OP76285	SQ1412

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	27.9		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	8.60		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	46.2		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	15.1		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	56.4		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	104%	106%	70-130%
	13C2-PFDA	63%	99%	70-130%
	d5-EtFOSAA	70%	81%	70-130%
	13C3-HFPO-DA	114%	111%	70-130%

U = Not detected LOD = Limit of Detection
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

4.2
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-INF200-072519		
Lab Sample ID:	FA66397-2	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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(a) Confirmation run.

(b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected LOD = Limit of Detection
 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

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-MP205-072519		
Lab Sample ID:	FA66397-3	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7003.D	1	08/07/19 17:17	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	3Q7251.D	1	08/13/19 15:08	NAF	08/12/19 07:30	OP76319	S3Q147

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	106%	113%	70-130%
	13C2-PFDA	111%	105%	70-130%
	d5-EtFOSAA	96%	94%	70-130%
	13C3-HFPO-DA	113%	104%	70-130%

U = Not detected LOD = Limit of Detection
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

Report of Analysis

Client Sample ID: WI-CV-FCWTP-MP205-072519	
Lab Sample ID: FA66397-3	Date Sampled: 07/25/19
Matrix: DW - Drinking Water	Date Received: 07/26/19
Method: EPA 537.1 REV 1.0 EPA 537	Percent Solids: n/a
Project: TCWTS; Coupeville, WA	

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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- (a) Confirmation run.
- (b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected	LOD = Limit of Detection	J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 141)		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-205-072519	
Lab Sample ID:	FA66397-4	Date Sampled: 07/25/19
Matrix:	DW - Drinking Water FB	Date Received: 07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids: n/a
Project:	TCWTS; Coupeville, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7004.D	1	08/07/19 17:32	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	Q62304.D	1	08/13/19 12:32	NAF	08/09/19 12:30	OP76285	SQ1412

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	102%	104%	70-130%
	13C2-PFDA	94%	98%	70-130%
	d5-EtFOSAA	82%	84%	70-130%
	13C3-HFPO-DA	111%	109%	70-130%

U = Not detected LOD = Limit of Detection
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

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-205-072519		
Lab Sample ID:	FA66397-4	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water FB	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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(a) Confirmation run.

(b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected LOD = Limit of Detection
 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

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-EF209-072519		Date Sampled:	07/25/19
Lab Sample ID:	FA66397-5	Date Received:	07/26/19	
Matrix:	DW - Drinking Water	Percent Solids:	n/a	
Method:	EPA 537.1 REV 1.0 EPA 537			
Project:	TCWTS; Coupeville, WA			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7005.D	1	08/07/19 17:48	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	3Q7252.D	1	08/13/19 15:24	NAF	08/12/19 07:30	OP76319	S3Q147

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	107%	114%	70-130%
	13C2-PFDA	105%	101%	70-130%
	d5-EtFOSAA	93%	84%	70-130%
	13C3-HFPO-DA	111%	101%	70-130%

U = Not detected LOD = Limit of Detection
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

4.5
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-EF209-072519		
Lab Sample ID:	FA66397-5	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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- (a) Confirmation run.
- (b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected	LOD = Limit of Detection	J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 141)		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.5
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-209-072519		
Lab Sample ID:	FA66397-6	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water FB	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7006.D	1	08/07/19 18:03	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	3Q7253.D	1	08/13/19 15:39	NAF	08/12/19 07:30	OP76319	S3Q147

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	105%	114%	70-130%
	13C2-PFDA	110%	112%	70-130%
	d5-EtFOSAA	97%	99%	70-130%
	13C3-HFPO-DA	115%	105%	70-130%

U = Not detected LOD = Limit of Detection
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

4.6
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-209-072519		
Lab Sample ID:	FA66397-6	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water FB	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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(a) Confirmation run.

(b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected LOD = Limit of Detection
 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

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-INF001-072519		
Lab Sample ID:	FA66397-7	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water FB	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7007.D	1	08/07/19 18:19	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	3Q7254.D	1	08/13/19 15:55	NAF	08/12/19 07:30	OP76319	S3Q147

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	240 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	106%	110%	70-130%
	13C2-PFDA	114%	105%	70-130%
	d5-EtFOSAA	101%	95%	70-130%
	13C3-HFPO-DA	111%	101%	70-130%

U = Not detected LOD = Limit of Detection
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

Report of Analysis

Client Sample ID: WI-CV-FCWTP-FB-INF001-072519		Date Sampled: 07/25/19
Lab Sample ID: FA66397-7		Date Received: 07/26/19
Matrix: DW - Drinking Water FB		Percent Solids: n/a
Method: EPA 537.1 REV 1.0 EPA 537		
Project: TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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- (a) Confirmation run.
- (b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected	LOD = Limit of Detection	J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 141)		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.7
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-INF001-072519		
Lab Sample ID:	FA66397-8	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7008.D	1	08/07/19 18:35	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	Q62305.D	1	08/13/19 12:47	NAF	08/09/19 12:30	OP76285	SQ1412

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	28.5		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	8.73		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	51.0		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	13.5		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	50.0		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	101%	105%	70-130%
	13C2-PFDA	100%	93%	70-130%
	d5-EtFOSAA	93%	77%	70-130%
	13C3-HFPO-DA	104%	114%	70-130%

U = Not detected LOD = Limit of Detection
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

4.8
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-INF001-072519		
Lab Sample ID:	FA66397-8	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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(a) Confirmation run.

(b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected LOD = Limit of Detection
 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

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-INF001P-072519		
Lab Sample ID:	FA66397-9	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7011.D	1	08/07/19 19:22	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	Q62306.D	1	08/13/19 13:03	NAF	08/09/19 12:30	OP76285	SQ1412

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	28.9		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	8.91		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	51.6		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	14.1		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	52.0		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	107%	109%	70-130%
	13C2-PFDA	94%	95%	70-130%
	d5-EtFOSAA	84%	88%	70-130%
	13C3-HFPO-DA	112%	115%	70-130%

U = Not detected LOD = Limit of Detection
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

4.9
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-INF001P-072519		
Lab Sample ID:	FA66397-9	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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- (a) Confirmation run.
- (b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected	LOD = Limit of Detection	J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 141)		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.9
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-EF002-072519		
Lab Sample ID:	FA66397-10	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water FB	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7012.D	1	08/07/19 19:37	NAF	08/06/19 13:30	OP76240	S3Q143
Run #2 ^a	3Q7255.D	1	08/13/19 16:10	NAF	08/12/19 07:30	OP76319	S3Q147

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	240 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	106%	113%	70-130%
	13C2-PFDA	112%	106%	70-130%
	d5-EtFOSAA	100%	92%	70-130%
	13C3-HFPO-DA	113%	101%	70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 141) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.10
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-FB-EF002-072519		
Lab Sample ID:	FA66397-10	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water FB	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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- (a) Confirmation run.
- (b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected	LOD = Limit of Detection	J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 141)		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.10
4

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-EF002-072519		
Lab Sample ID:	FA66397-11	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3Q7033.D	1	08/08/19 15:40	NAF	08/06/19 13:30	OP76240	S3Q144
Run #2 ^a	Q62307.D	1	08/13/19 13:18	NAF	08/09/19 12:30	OP76285	SQ1412

	Initial Volume	Final Volume
Run #1	250 ml	1.0 ml
Run #2	250 ml	1.0 ml

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS								
307-24-4	Perfluorohexanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-85-9	Perfluoroheptanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-67-1	Perfluorooctanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
335-76-2	Perfluorodecanoic acid	2.0 U		4.0	2.0	1.0	ng/l	
2058-94-8	Perfluoroundecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
307-55-1	Perfluorododecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
72629-94-8	Perfluorotridecanoic acid	3.0 U		4.0	3.0	2.0	ng/l	
376-06-7	Perfluorotetradecanoic acid ^b	3.0 U		4.0	3.0	2.0	ng/l	

PERFLUOROALKYLSULFONATES								
375-73-5	Perfluorobutanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U		4.0	2.0	1.0	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U		4.0	2.0	1.5	ng/l	

PERFLUOROOCCTANESULFONAMIDOACETIC ACIDS								
2355-31-9	MeFOSAA	6.0 U		8.0	6.0	4.0	ng/l	
2991-50-6	EtFOSAA	6.0 U		8.0	6.0	4.0	ng/l	

NEXT GENERATION PFAS ANALYTES								
13252-13-6	HFPO-DA (GenX)	10 U		20	10	6.0	ng/l	
919005-14-4	ADONA	4.0 U		8.0	4.0	2.0	ng/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	4.0 U		8.0	4.0	2.0	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.0 U		8.0	4.0	3.0	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	88%	112%	70-130%
	13C2-PFDA	88%	104%	70-130%
	d5-EtFOSAA	76%	85%	70-130%
	13C3-HFPO-DA	93%	118%	70-130%

U = Not detected LOD = Limit of Detection
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

Report of Analysis

Client Sample ID:	WI-CV-FCWTP-EF002-072519		
Lab Sample ID:	FA66397-11	Date Sampled:	07/25/19
Matrix:	DW - Drinking Water	Date Received:	07/26/19
Method:	EPA 537.1 REV 1.0 EPA 537	Percent Solids:	n/a
Project:	TCWTS; Coupeville, WA		

Perfluorinated Alkyl Acids

CAS No.	Compound	Result	MCL	LOQ	LOD	DL	Units	Q
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(a) Confirmation run.

(b) Associated BS recovery outside control limits. Confirmed ND by re-extraction and reanalysis.

U = Not detected LOD = Limit of Detection
 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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits



CHAIN OF CUSTODY

FA66397

Ref. Document # 501207-07252019

Page 1 of 1

Project Manager: *Jeff Gilliam*

Project Number: 501207

Project Name: TCWTS

Subcontract Agreement #: TBD

Waybill Number:

SGS North America, Inc
Lab Destination: 4405 Vireland Road, Suite C-15
Orlando, FL 32811

Lab Contact Name / ph. #: Heather Wandrey 609-495-5321

Send Report To: Natasha Sullivan
Phone/Fax Number: natasha.sullivan@aptim.com
Address: 434 Wanamaker Rd
City: Coupeville, WA 98239

Analyses Requested						
PFAS EPA 537.1	PFAS EPA 537.1 (MS)	PFAS EPA 537.1 (MSD)				
TRIZMA	TRIZMA	TRIZMA				
2 x 250 ml HDPE	2 x 250 ml HDPE	2 x 250 ml HDPE				

Sampler's Name(s): Mathew Bryan

Collection Information

Sample ID	Location ID	Date	Time	Method	Matrix	# of containers	Container Type	Preservative										
								TRIZMA	TRIZMA	TRIZMA								
1 WI-CV-FCWTP-INF200-072519	GAC Influent SA-200	07/25/19	11:37	G	DW	2	250ml HDPE	X										
2 WI-CV-FCWTP-FB-INF200-072519	Field Blank GAC Influent SA-200	07/25/19	11:35	G	DW	2	250ml HDPE	X										
3 WI-CV-FCWTP-MP205-072519	Lead Gac Midpoint SA-205	07/25/19	11:45	G	DW	2	250ml HDPE	X										
4 WI-CV-FCWTP-FB-205-072519	Field Blank Gac Midpoint	07/25/19	11:46	G	DW	2	250ml HDPE	X										
5 WI-CV-FCWTP-EF209-072519	Gac Effluent SA-209	07/25/19	11:50	G	DW	2	250ml HDPE	X										
6 WI-CV-FCWTP-FB-209-072519	Field Blank Gac Effluent	07/25/19	11:52	G	DW	2	250ml HDPE	X										
7 WI-CV-FCWTP-FB-INF001-072519	Field Blank Plant Influent	07/25/19	12:00	G	DW	2	250ml HDPE	X										
8 WI-CV-FCWTP-INF001-072519	Existing Plant Influent	07/25/19	12:03	G	DW	2	250ml HDPE	X										
9 WI-CV-FCWTP-INF001P-072519	Existing Plant Influent	07/25/19	12:03	G	DW	2	250ml HDPE	X										
10 WI-CV-FCWTP-FB-EF002-072519	Field blank plant effluent	07/25/19	12:09	G	DW	2	250ml HDPE	X										
11 WI-CV-FCWTP-FB-EF002-072519	Final plant effluent	07/25/19	12:10	G	DW	2	250ml HDPE	X										
12 WI-CV-FCWTP-EF002-072519-MS	Final plant effluent (MS)	07/25/19	12:10	G	DW	1	250ml HDPE		X									
13 WI-CV-FCWTP-EF002-072519-MSD	Final plant effluent (MSD)	07/25/19	12:10	G	DW	1	250ml HDPE			X								
Temp Blank																	X	

Special Instructions: Level 4 Reporting

Turnaround Time: <u>STANDARD TAT</u> <input type="checkbox"/> 24-hr <input type="checkbox"/> 48-hr <input type="checkbox"/> 72-hr <input type="checkbox"/> 5-day	Level of QC Required: <u>Stage 2A</u> <u>Stage 2B</u> <u>Stage 3</u>	Project Specific:	Method Codes LF= low flow G = Grab
Relinquished By: <i>Mathew Bryan</i> Date: <u>7-25-19</u> Time: <u>13:35</u>	Received By: <i>Fed Ex</i> Date: _____ Time: _____		Matrix Codes DW = Drinking Water SO = Soil GW = Ground Water BW = Blank Water WW = Waste Water WP = Waste Product
Relinquished By: <i>Fed Ex</i> Date: _____ Time: _____	Received By: <i>[Signature]</i> Date: <u>7-26-19</u> Time: <u>0900</u>		

3.4.

FA66397: Chain of Custody

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5.1
5



QC Evaluation: DOD QSM5 Limits

Job Number: FA66397
Account: APTIM
Project: TCWTS; Coupeville, WA
Collected: 07/25/19

QC Sample ID	CAS#	Analyte	Sample Result Type	Result Type	Units	Limits
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No Exceptions found.

* Sample used for QC is not from job FA66397

5.2
5

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP76240-MB	3Q7000.D	1	08/07/19	NAF	08/06/19	OP76240	S3Q143

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FA66397-1, FA66397-2, FA66397-3, FA66397-4, FA66397-5, FA66397-6, FA66397-7, FA66397-8, FA66397-9, FA66397-10, FA66397-11

CAS No.	Compound	Result	RL	MDL	Units	Q
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.0010	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.0010	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.0010	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.0010	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.0010	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.0020	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.0020	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.0020	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.0020	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.0010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.0010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.0015	ug/l	
2355-31-9	MeFOSAA	ND	0.0080	0.0040	ug/l	
2991-50-6	EtFOSAA	ND	0.0080	0.0040	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0060	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0020	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0020	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0030	ug/l	

CAS No.	Surrogate Recoveries	Limits	
	13C2-PFHxA	104%	70-130%
	13C2-PFDA	108%	70-130%
	d5-EtFOSAA	100%	70-130%
	13C3-HFPO-DA	112%	70-130%

Blank Spike Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP76240-BS	3Q6999.D	1	08/07/19	NAF	08/06/19	OP76240	S3Q143

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FA66397-1, FA66397-2, FA66397-3, FA66397-4, FA66397-5, FA66397-6, FA66397-7, FA66397-8, FA66397-9, FA66397-10, FA66397-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
307-24-4	Perfluorohexanoic acid	0.08	0.0817	102	70-130
375-85-9	Perfluoroheptanoic acid	0.08	0.0806	101	70-130
335-67-1	Perfluorooctanoic acid	0.08	0.0829	104	70-130
375-95-1	Perfluorononanoic acid	0.08	0.0841	105	70-130
335-76-2	Perfluorodecanoic acid	0.08	0.0854	107	70-130
2058-94-8	Perfluoroundecanoic acid	0.08	0.0767	96	70-130
307-55-1	Perfluorododecanoic acid	0.08	0.0741	93	70-130
72629-94-8	Perfluorotridecanoic acid	0.08	0.0571	71	70-130
376-06-7	Perfluorotetradecanoic acid	0.08	0.0398	50* a	70-130
375-73-5	Perfluorobutanesulfonic acid	0.08	0.0789	99	70-130
355-46-4	Perfluorohexanesulfonic acid	0.08	0.0807	101	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.08	0.0772	97	70-130
2355-31-9	MeFOSAA	0.08	0.0771	96	70-130
2991-50-6	EtFOSAA	0.08	0.0774	97	70-130
13252-13-6	HFPO-DA (GenX)	0.4	0.416	104	70-130
919005-14-4	ADONA	0.08	0.0765	96	70-130
756426-58-19	Cl-PF3ONS (F-53B Major)	0.08	0.0683	85	70-130
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.08	0.0616	77	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA	106%	70-130%
	13C2-PFDA	107%	70-130%
	d5-EtFOSAA	98%	70-130%
	13C3-HFPO-DA	108%	70-130%

(a) Outside control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP76240-MS	3Q7027.D	1	08/08/19	NAF	08/06/19	OP76240	S3Q144
OP76240-MSD	3Q7028.D	1	08/08/19	NAF	08/06/19	OP76240	S3Q144
FA66397-11	3Q7033.D	1	08/08/19	NAF	08/06/19	OP76240	S3Q144

The QC reported here applies to the following samples:

Method: EPA 537.1 REV 1.0

FA66397-1, FA66397-2, FA66397-3, FA66397-4, FA66397-5, FA66397-6, FA66397-7, FA66397-8, FA66397-9, FA66397-10, FA66397-11

CAS No.	Compound	FA66397-11 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
307-24-4	Perfluorohexanoic acid	0.0040 U	0.08	0.0841	105	0.08	0.0850	106	1	70-130/30
375-85-9	Perfluoroheptanoic acid	0.0040 U	0.08	0.0829	104	0.08	0.0829	104	0	70-130/30
335-67-1	Perfluorooctanoic acid	0.0040 U	0.08	0.0841	105	0.08	0.0832	104	1	70-130/30
375-95-1	Perfluorononanoic acid	0.0040 U	0.08	0.0825	103	0.08	0.0809	101	2	70-130/30
335-76-2	Perfluorodecanoic acid	0.0040 U	0.08	0.0811	101	0.08	0.0777	97	4	70-130/30
2058-94-8	Perfluoroundecanoic acid	0.0040 U	0.08	0.0963	120	0.08	0.101	126	5	70-130/30
307-55-1	Perfluorododecanoic acid	0.0040 U	0.08	0.0734	92	0.08	0.0734	92	0	70-130/30
72629-94-8	Perfluorotridecanoic acid	0.0040 U	0.08	0.0435	54* a	0.08	0.0375	47* a	15	70-130/30
376-06-7	Perfluorotetradecanoic acid	0.0040 U	0.08	0.0202	25* a	0.08	0.0153	19* a	28	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.0040 U	0.08	0.0841	105	0.08	0.0882	110	5	70-130/30
355-46-4	Perfluorohexanesulfonic acid	0.0040 U	0.08	0.0859	107	0.08	0.0883	110	3	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.0040 U	0.08	0.0800	100	0.08	0.0814	102	2	70-130/30
2355-31-9	MeFOSAA	0.0080 U	0.08	0.0813	102	0.08	0.0800	100	2	70-130/30
2991-50-6	EtFOSAA	0.0080 U	0.08	0.0768	96	0.08	0.0751	94	2	70-130/30
13252-13-6	HFPO-DA (GenX)	0.020 U	0.4	0.437	109	0.4	0.454	114	4	70-130/30
919005-14-4	ADONA	0.0080 U	0.08	0.0775	97	0.08	0.0801	100	3	70-130/30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0080 U	0.08	0.0691	86	0.08	0.0693	87	0	70-130/30
763051-92-911	Cl-PF3OUdS (F-53B Minor)	0.0080 U	0.08	0.0493	62*	0.08	0.0480	60*	3	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	FA66397-11	Limits
	13C2-PFHxA	110%	112%	88%	70-130%
	13C2-PFDA	102%	98%	88%	70-130%
	d5-EtFOSAA	96%	98%	76%	70-130%
	13C3-HFPO-DA	119%	122%	93%	70-130%

(a) Outside control limits.

* = Outside of Control Limits.

Internal Standard Area Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Check Std:	S3Q143-CC141	Injection Date:	08/07/19
Lab File ID:	3Q6997.D	Injection Time:	15:43
Instrument ID:	GCMS3Q	Method:	EPA 537.1 REV 1.0

	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6						
	AREA	RT	AREA	RT	AREA	RT						
Initial Cal ^a	210421	3.45	113309	6.46	402463	6.48	73311	7.07	61255	7.69	492467	8.31
Check Std ^b	220914	3.45	118696	6.47	423873	6.49	76527	7.07	67734	7.70	536428	8.31
Upper Limit ^c	294589	4.45	158633	7.47	563448	7.49	102635	8.07	85757	8.70	689454	9.31
Lower Limit ^d	147295	2.45	79316	5.47	281724	5.49	51318	6.07	42879	6.70	344727	7.31

Lab Sample ID	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6						
	AREA	RT	AREA	RT	AREA	RT						
OP76240-BS	215057	3.45	114779	6.47	408385	6.49	74013	7.07	63545	7.70	521201	8.31
OP76240-MB	220763	3.46	113545	6.47	429709	6.49	76907	7.07	66456	7.70	509916	8.31
FA66397-1	216185	3.46	111255	6.49	421875	6.50	75655	7.08	66298	7.70	554069	8.31
FA66397-2	221091	3.45	117124	6.47	431063	6.49	65246	7.07	31391 ^e	7.70	51058 ^e	8.31
FA66397-3	204704	3.45	104750	6.47	394851	6.50	70822	7.08	61208	7.70	503636	8.31
FA66397-4	209831	3.46	112931	6.47	412441	6.49	73042	7.08	62985	7.70	494615	8.31
FA66397-5	202146	3.46	104489	6.49	394432	6.50	71290	7.08	61059	7.70	546549	8.31
FA66397-6	196129	3.46	101590	6.49	385068	6.50	69100	7.08	60385	7.70	522735	8.31
FA66397-7	220660	3.46	113571	6.49	429811	6.50	77692	7.08	66750	7.70	577777	8.31
FA66397-8	202127	3.45	110162	6.49	405032	6.50	71840	7.08	58617	7.70	315588 ^e	8.31

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA
- IS 6 = 13C2-PFDoDA

- (a) Initial Cal is: S3Q141-ICC141 3Q6930.D 08/05/19 12:22. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to +50% of initial cal area.
- (c) Upper Limit = +40% of initial standard area; Retention time +1 minutes of check standard.
- (d) Lower Limit = -30% of initial standard area; Retention time -1 minutes of check standard.
- (e) Outside control limits.

Internal Standard Area Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Check Std:	S3Q143-CC141	Injection Date:	08/07/19
Lab File ID:	3Q7009.D	Injection Time:	18:50
Instrument ID:	GCMS3Q	Method:	EPA 537.1 REV 1.0

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	210421	3.45	113309	6.46	402463	6.48	73311	7.07	61255	7.69	492467	8.31
Check Std ^b	223215	3.46	125833	6.47	414941	6.49	75847	7.07	66568	7.70	537132	8.31
Upper Limit ^c	294589	4.46	158633	7.47	563448	7.49	102635	8.07	85757	8.70	689454	9.31
Lower Limit ^d	147295	2.46	79316	5.47	281724	5.49	51318	6.07	42879	6.70	344727	7.31

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
FA66397-9	220014	3.45	119481	6.47	438191	6.50	74851	7.08	52761	7.70	136797 ^e	8.31
FA66397-10	211026	3.46	108170	6.49	411276	6.50	74329	7.08	63367	7.70	526671	8.31
ZZZZZZ	212393	3.45	109233	6.47	412628	6.49	75139	7.08	65894	7.70	595903	8.31
ZZZZZZ	202381	3.45	104076	6.47	395064	6.49	70918	7.08	61745	7.70	559294	8.31
ZZZZZZ	189079	3.43	109620	6.47	396958	6.49	67043	7.07	38265 ^e	7.70	82795 ^e	8.31
S3Q143-ECC141	217056	3.45	117540	6.47	418379	6.49	76501	7.07	68021	7.70	537882	8.31

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA
- IS 6 = 13C2-PFDoDA

- (a) Initial Cal is: S3Q141-ICC141 3Q6930.D 08/05/19 12:22. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to +50% of initial cal area.
- (c) Upper Limit = +40% of initial standard area; Retention time +1 minutes of check standard.
- (d) Lower Limit = -30% of initial standard area; Retention time -1 minutes of check standard.
- (e) Outside control limits.

Internal Standard Area Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Check Std:	S3Q144-CC141	Injection Date:	08/08/19
Lab File ID:	3Q7024.D	Injection Time:	13:15
Instrument ID:	GCMS3Q	Method:	EPA 537.1 REV 1.0

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	210421	3.45	113309	6.46	402463	6.48	73311	7.07	61255	7.69	492467	8.31
Check Std ^b	224514	3.43	112512	6.45	433507	6.47	79309	7.05	66075	7.68	528328	8.29
Upper Limit ^c	294589	4.43	158633	7.45	563448	7.47	102635	8.05	85757	8.68	689454	9.29
Lower Limit ^d	147295	2.43	79316	5.45	281724	5.47	51318	6.05	42879	6.68	344727	7.29

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP76240-MS	217578	3.45	111799	6.46	402257	6.48	71055	7.05	55395	7.69	340394 ^e	8.29
OP76240-MSD	219179	3.45	110803	6.46	398849	6.48	67837	7.05	50724	7.69	305989 ^e	8.29
FA66397-11	282987	3.46	140567	6.47	540588	6.49	95646	7.07	81229	7.70	635841	8.31

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA
- IS 6 = 13C2-PFDoDA

- (a) Initial Cal is: S3Q141-ICC141 3Q6930.D 08/05/19 12:22. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to + 50% of initial cal area.
- (c) Upper Limit = + 40% of initial standard area; Retention time + 1 minutes of check standard.
- (d) Lower Limit = -30% of initial standard area; Retention time -1 minutes of check standard.
- (e) Outside control limits.

6.4.3
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Internal Standard Area Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Check Std:	S3Q147-ICC147	Injection Date:	08/13/19
Lab File ID:	3Q7242.D	Injection Time:	12:22
Instrument ID:	GCMS3Q	Method:	EPA 537.1 REV 1.0

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	190517	3.45	143706	6.48	406801	6.49	67240	7.08	76689	7.69	649042	8.34
Check Std ^b	185443	3.45	138493	6.48	396973	6.49	64757	7.08	75612	7.69	631504	8.34
Upper Limit ^c	266724	4.45	201188	7.48	569521	7.49	94136	8.08	107365	8.69	908659	9.34
Lower Limit ^d	133362	2.45	100594	5.48	284761	5.49	47068	6.08	53682	6.69	454329	7.34

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP76319-BS	189482	3.43	141848	6.49	406748	6.51	67157	7.09	74824	7.71	630151	8.35
OP76319-MB	190272	3.45	135161	6.48	412229	6.51	67462	7.08	76516	7.71	655639	8.35
FA66397-1 ^e	188303	3.45	132757	6.49	407008	6.51	65849	7.08	74724	7.71	633696	8.35
FA66397-3 ^e	189402	3.45	132684	6.49	408186	6.51	64980	7.09	74900	7.71	592715	8.35
FA66397-5 ^e	212406	3.45	147436	6.49	453008	6.51	72011	7.09	81241	7.71	536922	8.35
FA66397-6 ^e	195247	3.45	137679	6.49	417010	6.51	67718	7.09	77373	7.71	646456	8.35
FA66397-7 ^e	213571	3.45	150446	6.49	461977	6.51	72886	7.09	82611	7.71	667280	8.35
FA66397-10 ^e	188533	3.45	133614	6.49	408666	6.51	65703	7.09	74756	7.71	612042	8.35

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA
- IS 6 = 13C2-PFDoDA

- (a) Initial Cal is: S3Q147-ICC147 3Q7242.D 08/13/19 12:22. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to +50% of initial cal area.
- (c) Upper Limit = +40% of initial standard area; Retention time +1 minutes of check standard.
- (d) Lower Limit = -30% of initial standard area; Retention time -1 minutes of check standard.
- (e) Confirmation run.

Internal Standard Area Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Check Std:	SQ1412-ICC1412	Injection Date:	08/13/19
Lab File ID:	Q62294.D	Injection Time:	09:56
Instrument ID:	GCMSQ	Method:	EPA 537.1 REV 1.0

	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6						
	AREA	RT	AREA	RT	AREA	RT						
Initial Cal ^a	37030	4.11	11107	7.20	69290	7.21	20663	7.73	5998	8.18	72330	8.90
Check Std ^b	37715	4.11	11000	7.20	68265	7.21	20874	7.73	5817	8.18	73210	8.90
Upper Limit ^c	55545	5.11	16661	8.20	103935	8.21	30995	8.73	8997	9.18	108495	9.90
Lower Limit ^d	18515	3.11	5554	6.20	34645	6.21	10332	6.73	2999	7.18	36165	7.90

Lab Sample ID	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6						
	AREA	RT	AREA	RT	AREA	RT						
OP76285-BS2	34545	4.11	9988	7.20	61963	7.21	19343	7.73	5096	8.19	73470	8.90
OP76285-BS	37636	4.11	10306	7.21	70596	7.21	20807	7.75	6101	8.19	84106	8.90
OP76285-MB	38132	4.11	10857	7.21	74622	7.21	21269	7.75	6301	8.19	86269	8.90
FA66397-2 ^e	33827	4.10	10329	7.21	70380	7.21	20137	7.75	6332	8.19	89347	8.90
FA66397-4 ^e	39977	4.11	11157	7.21	77316	7.23	21725	7.75	6676	8.19	96685	8.90
FA66397-8 ^e	33405	4.10	10021	7.21	66952	7.23	19520	7.75	5685	8.19	69630	8.90
FA66397-9 ^e	33823	4.10	9765	7.21	66901	7.23	19418	7.75	5376	8.19	70684	8.90
FA66397-11 ^e	39203	4.11	10639	7.21	70867	7.23	21694	7.75	6227	8.19	91166	8.90
ZZZZZZ	29184	4.08	9311	7.21	61915	7.23	19347	7.75	5457	8.19	85280	8.90

- IS 1 = 13C3-PFPeA
- IS 2 = 13C2-6:2FTS
- IS 3 = 13C2-PFOA
- IS 4 = 13C4-PFOS
- IS 5 = d3-MeFOSAA
- IS 6 = 13C2-PFDoDA

- (a) Initial Cal is: SQ1412-ICC1412 Q62294.D 08/13/19 09:56. Area is AVERAGE of initial cal points.
- (b) Check Std Limit = -50 to + 50% of initial cal area.
- (c) Upper Limit = + 50% of initial standard area; Retention time + 1 minutes of check standard.
- (d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.
- (e) Confirmation run.

Surrogate Recovery Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Method: EPA 537.1 REV 1.0	Matrix: DW
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA66397-1	3Q7250.D	111	104	88	101
FA66397-1	3Q7001.D	105	109	94	111
FA66397-2	Q62303.D	106	99	81	111
FA66397-2	3Q7002.D	104	63*	70	114
FA66397-3	3Q7251.D	113	105	94	104
FA66397-3	3Q7003.D	106	111	96	113
FA66397-4	Q62304.D	104	98	84	109
FA66397-4	3Q7004.D	102	94	82	111
FA66397-5	3Q7252.D	114	101	84	101
FA66397-5	3Q7005.D	107	105	93	111
FA66397-6	3Q7253.D	114	112	99	105
FA66397-6	3Q7006.D	105	110	97	115
FA66397-7	3Q7254.D	110	105	95	101
FA66397-7	3Q7007.D	106	114	101	111
FA66397-8	Q62305.D	105	93	77	114
FA66397-8	3Q7008.D	101	100	93	104
FA66397-9	Q62306.D	109	95	88	115
FA66397-9	3Q7011.D	107	94	84	112
FA66397-10	3Q7255.D	113	106	92	101
FA66397-10	3Q7012.D	106	112	100	113
FA66397-11	3Q7033.D	88	88	76	93
FA66397-11	Q62307.D	112	104	85	118
OP76240-BS	3Q6999.D	106	107	98	108
OP76240-MB	3Q7000.D	104	108	100	112
OP76240-MS	3Q7027.D	110	102	96	119
OP76240-MSD	3Q7028.D	112	98	98	122

Surrogate Compounds	Recovery Limits
S1 = 13C2-PFHxA	70-130%
S2 = 13C2-PFDA	70-130%
S3 = d5-EtFOSAA	70-130%
S4 = 13C3-HFPO-DA	70-130%

6.5.1
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Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q141-ICC141
 Lab FileID: 3Q6930.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods											
Method File	537_080519_S3Q141_quantmethod.xml											
Batch Name	D:\MassHunter\Data\0805_537_S3Q141\QuantResults\S3Q141_batch.bin											
Last Calib Update	8/5/2019 3:03:09 PM											
Level Name	Calibration Files	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
1	D:\MassHunter\Data\0805_537_S3Q141\3q6925.d											
2	D:\MassHunter\Data\0805_537_S3Q141\3q6926.d											
3	D:\MassHunter\Data\0805_537_S3Q141\3q6927.d											
4	D:\MassHunter\Data\0805_537_S3Q141\3q6928.d											
5	D:\MassHunter\Data\0805_537_S3Q141\3q6929.d											
6	D:\MassHunter\Data\0805_537_S3Q141\3q6930.d											
7	D:\MassHunter\Data\0805_537_S3Q141\3q6931.d											
8	D:\MassHunter\Data\0805_537_S3Q141\3q6932.d											
Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD	
I 13C2-6:2FTS												
T 4:2FTS	Avg RF	1.0544	0.9638	0.9376	0.9100	0.9391	0.9265	0.8863	0.8034	0.9276	7.631	
T 6:2FTS	Avg RF	1.1825	1.0310	1.0162	0.9792	1.0150	0.9970	0.9351	0.8241	0.9975	10.047	
T 8:2FTS	Avg RF	0.9184	0.8232	0.8245	0.8099	0.8015	0.8045	0.7383	0.6538	0.7968	9.530	
I 13C2-PFDODA												
T PFUnDA	Linear	0.8845	0.8234	0.8005	0.8119	0.8071	0.8031	0.8185	0.7933	0.8178	3.503	
T PFDODA	Linear	0.9922	0.9175	0.8913	0.8968	0.9078	0.9104	0.9360	0.9307	0.9228	3.459	
T PFTfDA	Linear	1.0600	0.9691	0.9671	0.9662	0.9791	0.9878	1.0215	1.0226	0.9967	3.444	
T PFTeDA	Quadratic	1.2166	1.0866	1.0697	1.0939	1.1049	1.1156	1.1532	1.1879	1.1285	4.621	
I 13C2-PFOA												
T PFBA	Linear	0.2065	0.1858	0.1821	0.1773	0.1815	0.1832	0.1947	0.2009	0.1890	5.531	
S 13C2-PFHA	Quadratic	0.7550	0.6943	0.6853	0.6788	0.6930	0.7044	0.7325	0.7411	0.7106	3.999	
T PFHxA	Linear	0.4173	0.3835	0.3722	0.3697	0.3768	0.3826	0.3991	0.4016	0.3878	4.277	
S 13C3-HFO-DA	Quadratic	0.0566	0.0501	0.0501	0.0492	0.0484	0.0426	0.0456	0.0426	0.0487	8.356	
T HFPO-DA	Quadratic	0.2050	0.1858	0.1826	0.1765	0.1755	0.1712	0.1631	0.1514	0.1764	9.023	
T PFHpA	Linear	1.2967	1.1743	1.1677	1.1563	1.1614	1.1803	1.2355	1.2554	1.2034	4.338	
T ADONA	Linear	1.5630	1.4120	1.3915	1.3715	1.3914	1.4143	1.4758	1.5170	1.4421	4.774	
T PFOA	Linear	0.9666	0.9084	0.8739	0.8573	0.8716	0.8789	0.8966	0.8932	0.8933	3.775	
T PFNA	Linear	1.0702	0.9704	0.9622	0.9512	0.9580	0.9625	0.9909	0.9940	0.9824	3.928	
T 9Cl-PFOSNs	Linear	0.1840	0.1707	0.1625	0.1582	0.1621	0.1624	0.1694	0.1704	0.1675	4.838	
S 13C2-PFDA	Linear	1.0933	1.0239	0.9834	0.9797	0.9904	0.9892	0.9887	0.9570	1.0007	4.163	
T PFDA	Linear	1.0513	0.9395	0.9644	0.9340	0.9459	0.9414	0.9420	0.9033	0.9527	4.542	
T 11Cl-PF3OLds	Linear	0.7812	0.6602	0.6526	0.6402	0.6418	0.6524	0.6761	0.6771	0.6727	6.833	
I 13C3-PFPeA												
T PFPeA	Linear	1.3867	1.2891	1.2364	1.2159	1.2377	1.2431	1.2876	1.2728	1.2711	4.217	
T PFPeS	Linear	0.2403	0.2305	0.2185	0.2109	0.2123	0.2119	0.2210	0.2155	0.2201	4.709	
I 13C4-PFOS												

Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q141-ICC141
 Lab FileID: 3Q6930.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T PFBS	Linear	1.0619	0.9585	0.9448	0.9089	0.9244	0.9373	0.9751	0.9914	0.9628	4.993
T PFHxS	Linear	1.0154	0.8995	0.8862	0.8282	0.8480	0.8866	0.9144	0.9123	0.8988	6.223
T PFHpS	Linear	0.9823	0.8569	0.8365	0.7963	0.8371	0.8138	0.8477	0.8299	0.8501	6.672
T PFOS	Linear	1.2166	1.1186	1.0902	1.0540	1.0647	1.0769	1.1112	1.1148	1.1059	4.586
T PFNS	Quadratic	0.9675	0.8191	0.7675	0.7292	0.7579	0.7566	0.7566	0.7206	0.7844	10.153
T PFDS	Linear	0.2335	0.2238	0.2294	0.2088	0.2148	0.2169	0.2188	0.2157	0.2202	3.700
I d3-MeFOSAA											
T FOSA	Quadratic	2.5576	2.4427	2.2455	2.2684	2.2274	2.1772	2.0485	1.8856	2.2316	9.409
T MeFOSAA	Linear	1.1997	1.0534	1.0558	1.0244	1.0507	1.0662	1.0785	1.0828	1.0764	4.923
S d5-EFOSAA	Linear	1.1473	0.9336	0.8978	0.9182	0.9501	0.9371	0.9410	0.9260	0.9564	8.235
T EFOSAA	Linear	1.0612	0.9415	0.9441	0.9591	0.9384	0.9574	0.9383	0.9464	0.9608	4.304

(RedFont and #) = Outlier Flag; (T) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q141-ICC141
 Lab FileID: 3Q6930.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T PFBA	Linear	$y = 0.198946 * x$	0.999356
T PFPEA	Linear	$y = 1.274315 * x$	0.999923
T PFBS	Linear	$y = 0.985961 * x$	0.999754
S 13C2-PFHXA	Quadratic	$y = 0.005992 * x^2 + 0.711766 * x$	0.999950
T PFHXA	Linear	$y = 0.400232 * x$	0.999837
T PFPEs	Linear	$y = 0.216422 * x$	0.999824
S 13C3-HFPO-DA	Quadratic	$y = -2.363836E-004 * x^2 + 0.048542 * x$	0.999995
T HFPO-DA	Quadratic	$y = -9.681862E-004 * x^2 + 0.175581 * x$	0.999992
T PFHpA	Linear	$y = 1.248307 * x$	0.999722
T PFHxS	Linear	$y = 0.911230 * x$	0.999881
T ADONA	Linear	$y = 1.504638 * x$	0.999562
T PFOA	Linear	$y = 0.893207 * x$	0.999972
T PFHpS	Linear	$y = 0.832828 * x$	0.999862
T PFOS	Linear	$y = 1.112397 * x$	0.999918
T PFNA	Linear	$y = 0.992033 * x$	0.999935
T FOSA	Quadratic	$y = -0.068779 * x^2 + 2.228654 * x$	0.999982
T 9Cl-PF3ONS	Linear	$y = 0.169875 * x$	0.999860
T PRNS	Quadratic	$y = -0.012018 * x^2 + 0.781248 * x$	0.999947
S 13C2-PEDA	Linear	$y = 0.964394 * x$	0.999703
T PFDA	Linear	$y = 0.912327 * x$	0.999506
T MeFOSAA	Linear	$y = 1.081096 * x$	0.999969
S d5-EFOSAA	Linear	$y = 0.929350 * x$	0.999927
T EtFOSAA	Linear	$y = 0.945176 * x$	0.999973
T PFDS	Linear	$y = 0.216340 * x$	0.999946
T PFUnDA	Linear	$y = 0.798586 * x$	0.999763
T 11Cl-PF3OUds	Linear	$y = 0.675825 * x$	0.999901
T PFDoDA	Linear	$y = 0.930824 * x$	0.999957
T PFTfDA	Linear	$y = 1.020854 * x$	0.999919
T PFTeDA	Quadratic	$y = 0.015662 * x^2 + 1.110012 * x$	0.999990

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q141-ICV141
Lab FileID: 3Q6934.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0805_537_S3Q141\S3Q141.batch.bin

Level ID: Calibration File
1:D:\MassHunter\Data\0805_537_S3Q141\3q6925.d
2:D:\MassHunter\Data\0805_537_S3Q141\3q6926.d
3:D:\MassHunter\Data\0805_537_S3Q141\3q6927.d
4:D:\MassHunter\Data\0805_537_S3Q141\3q6928.d
5:D:\MassHunter\Data\0805_537_S3Q141\3q6929.d
6:D:\MassHunter\Data\0805_537_S3Q141\3q6930.d
7:D:\MassHunter\Data\0805_537_S3Q141\3q6931.d
8:D:\MassHunter\Data\0805_537_S3Q141\3q6932.d

Data File: 3q6934
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	0.000	# -100.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	18.039	-9.8	90.2
6:2FTS	20.000	18.382	-8.1	91.9
8:2FTS	20.000	18.331	-8.3	91.7
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	0.000	# -100.0	0.0
EtFOSAA	20.000	20.034	0.2	100.2
FOSA	20.000	19.522	-2.4	97.6
MeFOSAA	20.000	19.557	-2.2	97.8
PFBA	20.000	18.173	-9.1	90.9
PFBS	20.000	16.086	-19.6	80.4
PFDA	20.000	19.311	-3.4	96.6
PFDoDA	20.000	19.492	-2.5	97.5
PFDS	20.000	18.220	-8.9	91.1
PFHpA	20.000	18.810	-6.0	94.0
PFHpS	20.000	18.447	-7.8	92.2
PFHxA	20.000	17.349	-13.3	86.7
PFHxS	20.000	16.064	-19.7	80.3
PFNA	20.000	17.747	-11.3	88.7
PFNS	20.000	18.588	-7.1	92.9
PFOA	20.000	18.830	-5.9	94.1
PFOS	20.000	19.687	-1.6	98.4
PFPeA	20.000	18.455	-7.7	92.3
PFPeS	20.000	17.408	-13.0	87.0
PFTeDA	20.000	18.162	-9.2	90.8
PFTTrDA	20.000	20.983	4.9	104.9
PFUnDA	20.000	20.820	4.1	104.1
ADONA	20.000	0.000	# -100.0	0.0
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	100.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q141-ICV141
Lab FileID: 3Q6934.D

HFPO-DA	100.000	0.000	# -100.0	0.0
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CC Criteria: +/- 25%

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q141-ICV141
Lab FileID: 3Q6935.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0805_537_S3Q141\S3Q141.batch.bin

Level ID: Calibration File
1:D:\MassHunter\Data\0805_537_S3Q141\3q6925.d
2:D:\MassHunter\Data\0805_537_S3Q141\3q6926.d
3:D:\MassHunter\Data\0805_537_S3Q141\3q6927.d
4:D:\MassHunter\Data\0805_537_S3Q141\3q6928.d
5:D:\MassHunter\Data\0805_537_S3Q141\3q6929.d
6:D:\MassHunter\Data\0805_537_S3Q141\3q6930.d
7:D:\MassHunter\Data\0805_537_S3Q141\3q6931.d
8:D:\MassHunter\Data\0805_537_S3Q141\3q6932.d

Data File: 3q6935
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	0.000	# -100.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	0.000	# -100.0	0.0
EtFOSAA	20.000	17.153	-14.2	85.8
FOSA	20.000	0.000	# -100.0	0.0
MeFOSAA	20.000	16.696	-16.5	83.5
PFBA	20.000	0.000	# -100.0	0.0
PFBS	20.000	18.128	-9.4	90.6
PFDA	20.000	20.254	1.3	101.3
PFDoDA	20.000	18.429	-7.9	92.1
PFDS	20.000	0.000	# -100.0	0.0
PFHpA	20.000	17.410	-12.9	87.1
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	18.194	-9.0	91.0
PFHxS	20.000	18.120	-9.4	90.6
PFNA	20.000	18.994	-5.0	95.0
PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	18.692	-6.5	93.5
PFOS	20.000	19.436	-2.8	97.2
PFPeA	20.000	0.000	# -100.0	0.0
PFPeS	20.000	0.000	# -100.0	0.0
PFTeDA	20.000	18.885	-5.6	94.4
PFTTrDA	20.000	19.057	-4.7	95.3
PFUnDA	20.000	20.105	0.5	100.5
ADONA	20.000	18.549	-7.3	92.7
9Cl-PF3ONS	20.000	18.326	-8.4	91.6
11Cl-PF3OUdS	20.000	18.136	-9.3	90.7
13C3-HFPO-DA	100.000	0.000	# -100.0	0.0

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q141-ICV141
Lab FileID: 3Q6935.D

HFPO-DA	20.000	20.100	0.5	100.5
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CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q143-CC141
Lab FileID: 3Q6997.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0807_537_S3Q143\S3Q143.batch.bin

Level ID: Calibration File
1:D:\MassHunter\Data\0805_537_S3Q141\3q6925.d
2:D:\MassHunter\Data\0805_537_S3Q141\3q6926.d
3:D:\MassHunter\Data\0805_537_S3Q141\3q6927.d
4:D:\MassHunter\Data\0805_537_S3Q141\3q6928.d
5:D:\MassHunter\Data\0805_537_S3Q141\3q6929.d
6:D:\MassHunter\Data\0805_537_S3Q141\3q6930.d
7:D:\MassHunter\Data\0805_537_S3Q141\3q6931.d
8:D:\MassHunter\Data\0805_537_S3Q141\3q6932.d

Data File: 3q6997
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	21.106	5.5	105.5
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.747	-1.3	98.7
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	19.655	-1.7	98.3
6:2FTS	20.000	19.575	-2.1	97.9
8:2FTS	20.000	19.787	-1.1	98.9
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	20.257	1.3	101.3
EtFOSAA	20.000	20.005	0.0	100.0
FOSA	20.000	19.381	-3.1	96.9
MeFOSAA	20.000	19.306	-3.5	96.5
PFBA	20.000	18.259	-8.7	91.3
PFBS	20.000	18.533	-7.3	92.7
PFDA	20.000	21.066	5.3	105.3
PFDoDA	20.000	19.417	-2.9	97.1
PFDS	20.000	19.625	-1.9	98.1
PFHpA	20.000	18.768	-6.2	93.8
PFHpS	20.000	19.876	-0.6	99.4
PFHxA	20.000	19.146	-4.3	95.7
PFHxS	20.000	19.096	-4.5	95.5
PFNA	20.000	19.720	-1.4	98.6
PFNS	20.000	19.245	-3.8	96.2
PFOA	20.000	19.608	-2.0	98.0
PFOS	20.000	19.089	-4.6	95.4
PFPeA	20.000	19.262	-3.7	96.3
PFPeS	20.000	19.255	-3.7	96.3
PFTeDA	20.000	19.339	-3.3	96.7
PFTTrDA	20.000	19.319	-3.4	96.6
PFUnDA	20.000	20.197	1.0	101.0
ADONA	20.000	18.597	-7.0	93.0
9Cl-PF3ONS	20.000	18.965	-5.2	94.8
11Cl-PF3OUdS	20.000	18.724	-6.4	93.6
13C3-HFPO-DA	100.000	103.233	3.2	103.2

6.6.4
6

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q143-CC141
Lab FileID: 3Q6997.D

HFPO-DA	100.000	101.315	1.3	101.3
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CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q143-CC141
 Lab FileID: 3Q7009.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0807_537_S3Q143\S3Q143.batch.bin

Level ID: Calibration File
 1:D:\MassHunter\Data\0805_537_S3Q141\3q6925.d
 2:D:\MassHunter\Data\0805_537_S3Q141\3q6926.d
 3:D:\MassHunter\Data\0805_537_S3Q141\3q6927.d
 4:D:\MassHunter\Data\0805_537_S3Q141\3q6928.d
 5:D:\MassHunter\Data\0805_537_S3Q141\3q6929.d
 6:D:\MassHunter\Data\0805_537_S3Q141\3q6930.d
 7:D:\MassHunter\Data\0805_537_S3Q141\3q6931.d
 8:D:\MassHunter\Data\0805_537_S3Q141\3q6932.d

Data File: 3q7009
 Type : QC
 Level : 7

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	50.000	53.152	6.3	106.3
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	50.000	50.846	1.7	101.7
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	50.000	47.857	-4.3	95.7
6:2FTS	50.000	46.905	-6.2	93.8
8:2FTS	50.000	47.785	-4.4	95.6
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	50.000	50.956	1.9	101.9
EtFOSAA	50.000	50.408	0.8	100.8
FOSA	50.000	48.707	-2.6	97.4
MeFOSAA	50.000	50.500	1.0	101.0
PFBA	50.000	49.143	-1.7	98.3
PFBS	50.000	49.065	-1.9	98.1
PFDA	50.000	52.716	5.4	105.4
PFDoDA	50.000	50.098	0.2	100.2
PFDS	50.000	50.176	0.4	100.4
PFHpA	50.000	49.748	-0.5	99.5
PFHpS	50.000	51.723	3.4	103.4
PFHxA	50.000	50.138	0.3	100.3
PFHxS	50.000	50.238	0.5	100.5
PFNA	50.000	51.718	3.4	103.4
PFNS	50.000	50.441	0.9	100.9
PFOA	50.000	50.181	0.4	100.4
PFOS	50.000	50.244	0.5	100.5
PFPeA	50.000	50.022	0.0	100.0
PFPeS	50.000	49.796	-0.4	99.6
PFTeDA	50.000	49.816	-0.4	99.6
PFTTrDA	50.000	50.469	0.9	100.9
PFUnDA	50.000	51.095	2.2	102.2
ADONA	50.000	49.335	-1.3	98.7
9Cl-PF3ONS	50.000	49.752	-0.5	99.5
11Cl-PF3OUdS	50.000	49.338	-1.3	98.7
13C3-HFPO-DA	250.000	265.865	6.3	106.3

6.6.5
6

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q143-CC141
Lab FileID: 3Q7009.D

HFPO-DA	250.000	261.733	4.7	104.7
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CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q143-ECC141
 Lab FileID: 3Q7020.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0807_537_S3Q143\S3Q143.batch.bin

Level ID: Calibration File

- 1:D:\MassHunter\Data\0805_537_S3Q141\3q6925.d
- 2:D:\MassHunter\Data\0805_537_S3Q141\3q6926.d
- 3:D:\MassHunter\Data\0805_537_S3Q141\3q6927.d
- 4:D:\MassHunter\Data\0805_537_S3Q141\3q6928.d
- 5:D:\MassHunter\Data\0805_537_S3Q141\3q6929.d
- 6:D:\MassHunter\Data\0805_537_S3Q141\3q6930.d
- 7:D:\MassHunter\Data\0805_537_S3Q141\3q6931.d
- 8:D:\MassHunter\Data\0805_537_S3Q141\3q6932.d

Data File: 3q7020
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	21.639	8.2	108.2
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.614	-1.9	98.1
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	19.240	-3.8	96.2
6:2FTS	20.000	19.587	-2.1	97.9
8:2FTS	20.000	19.904	-0.5	99.5
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	20.239	1.2	101.2
EtFOSAA	20.000	19.912	-0.4	99.6
FOSA	20.000	19.211	-3.9	96.1
MeFOSAA	20.000	19.781	-1.1	98.9
PFBA	20.000	18.292	-8.5	91.5
PFBS	20.000	18.333	-8.3	91.7
PFDA	20.000	21.281	6.4	106.4
PFDoDA	20.000	19.576	-2.1	97.9
PFDS	20.000	19.287	-3.6	96.4
PFHpA	20.000	18.901	-5.5	94.5
PFHpS	20.000	19.865	-0.7	99.3
PFHxA	20.000	18.843	-5.8	94.2
PFHxS	20.000	18.461	-7.7	92.3
PFNA	20.000	20.125	0.6	100.6
PFNS	20.000	19.166	-4.2	95.8
PFOA	20.000	19.517	-2.4	97.6
PFOS	20.000	19.127	-4.4	95.6
PFPeA	20.000	19.458	-2.7	97.3
PFPeS	20.000	19.563	-2.2	97.8
PFTeDA	20.000	19.737	-1.3	98.7
PFTTrDA	20.000	19.564	-2.2	97.8
PFUnDA	20.000	20.504	2.5	102.5
ADONA	20.000	18.682	-6.6	93.4
9Cl-PF3ONS	20.000	18.684	-6.6	93.4
11Cl-PF3OUdS	20.000	18.788	-6.1	93.9
13C3-HFPO-DA	100.000	105.998	6.0	106.0

6.6.6
6

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q143-ECC141
Lab FileID: 3Q7020.D

HFPO-DA	100.000	102.373	2.4	102.4
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CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q144-CC141
 Lab FileID: 3Q7024.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0808_537_S3Q144\s3q144.batch.bin

Level ID: Calibration File
 1:D:\MassHunter\Data\0805_537_S3Q141\3q6925.d
 2:D:\MassHunter\Data\0805_537_S3Q141\3q6926.d
 3:D:\MassHunter\Data\0805_537_S3Q141\3q6927.d
 4:D:\MassHunter\Data\0805_537_S3Q141\3q6928.d
 5:D:\MassHunter\Data\0805_537_S3Q141\3q6929.d
 6:D:\MassHunter\Data\0805_537_S3Q141\3q6930.d
 7:D:\MassHunter\Data\0805_537_S3Q141\3q6931.d
 8:D:\MassHunter\Data\0805_537_S3Q141\3q6932.d

Data File: 3q7024
 Type : QC
 Level : 2

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	1.000	1.080	8.0	108.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	1.000	0.997	-0.3	99.7
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	1.000	1.067	6.7	106.7
6:2FTS	1.000	1.058	5.8	105.8
8:2FTS	1.000	1.045	4.5	104.5
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	1.000	0.997	-0.3	99.7
EtFOSAA	1.000	1.044	4.4	104.4
FOSA	1.000	1.028	2.8	102.8
MeFOSAA	1.000	0.964	-3.6	96.4
PFBA	1.000	0.941	-5.9	94.1
PFBS	1.000	0.964	-3.6	96.4
PFDA	1.000	1.071	7.1	107.1
PFDoDA	1.000	0.970	-3.0	97.0
PFDS	1.000	1.029	2.9	102.9
PFHpA	1.000	0.957	-4.3	95.7
PFHpS	1.000	1.015	1.5	101.5
PFHxA	1.000	0.998	-0.2	99.8
PFHxS	1.000	0.991	-0.9	99.1
PFNA	1.000	1.021	2.1	102.1
PFNS	1.000	0.973	-2.7	97.3
PFOA	1.000	1.003	0.3	100.3
PFOS	1.000	1.036	3.6	103.6
PFPeA	1.000	1.003	0.3	100.3
PFPeS	1.000	1.028	2.8	102.8
PFTeDA	1.000	0.944	-5.6	94.4
PFTTrDA	1.000	0.946	-5.4	94.6
PFUnDA	1.000	1.007	0.7	100.7
ADONA	1.000	0.929	-7.1	92.9
9Cl-PF3ONS	1.000	0.945	-5.5	94.5
11Cl-PF3OUdS	1.000	0.987	-1.3	98.7
13C3-HFPO-DA	5.000	5.727	14.5	114.5

6.6.7
6

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q144-CC141
Lab FileID: 3Q7024.D

HFPO-DA	5.000	5.659	13.2	113.2
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CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q144-CC141
 Lab FileID: 3Q7025.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0808_537_S3Q144\s3q144.batch.bin

Level ID: Calibration File
 1:D:\MassHunter\Data\0805_537_S3Q141\3q6925.d
 2:D:\MassHunter\Data\0805_537_S3Q141\3q6926.d
 3:D:\MassHunter\Data\0805_537_S3Q141\3q6927.d
 4:D:\MassHunter\Data\0805_537_S3Q141\3q6928.d
 5:D:\MassHunter\Data\0805_537_S3Q141\3q6929.d
 6:D:\MassHunter\Data\0805_537_S3Q141\3q6930.d
 7:D:\MassHunter\Data\0805_537_S3Q141\3q6931.d
 8:D:\MassHunter\Data\0805_537_S3Q141\3q6932.d

Data File: 3q7025
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	21.024	5.1	105.1
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.864	-0.7	99.3
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	19.833	-0.8	99.2
6:2FTS	20.000	19.641	-1.8	98.2
8:2FTS	20.000	19.384	-3.1	96.9
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	20.093	0.5	100.5
EtFOSAA	20.000	19.526	-2.4	97.6
FOSA	20.000	19.776	-1.1	98.9
MeFOSAA	20.000	19.727	-1.4	98.6
PFBA	20.000	18.562	-7.2	92.8
PFBS	20.000	18.811	-5.9	94.1
PFDA	20.000	20.931	4.7	104.7
PFDoDA	20.000	19.491	-2.5	97.5
PFDS	20.000	19.634	-1.8	98.2
PFHpA	20.000	19.090	-4.6	95.4
PFHpS	20.000	19.980	-0.1	99.9
PFHxA	20.000	19.250	-3.7	96.3
PFHxS	20.000	18.820	-5.9	94.1
PFNA	20.000	19.835	-0.8	99.2
PFNS	20.000	19.576	-2.1	97.9
PFOA	20.000	19.526	-2.4	97.6
PFOS	20.000	19.231	-3.8	96.2
PFPeA	20.000	19.344	-3.3	96.7
PFPeS	20.000	19.675	-1.6	98.4
PFTeDA	20.000	19.450	-2.8	97.2
PFTTrDA	20.000	19.037	-4.8	95.2
PFUnDA	20.000	20.275	1.4	101.4
ADONA	20.000	18.739	-6.3	93.7
9Cl-PF3ONS	20.000	18.674	-6.6	93.4
11Cl-PF3OUdS	20.000	19.401	-3.0	97.0
13C3-HFPO-DA	100.000	109.656	9.7	109.7

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q144-CC141
Lab FileID: 3Q7025.D

HFPO-DA	100.000	108.475	8.5	108.5
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CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q144-CC141
Lab FileID: 3Q7035.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0808_537_S3Q144\s3q144.batch.bin

Level ID: Calibration File
1:D:\MassHunter\Data\0805_537_S3Q141\3q6925.d
2:D:\MassHunter\Data\0805_537_S3Q141\3q6926.d
3:D:\MassHunter\Data\0805_537_S3Q141\3q6927.d
4:D:\MassHunter\Data\0805_537_S3Q141\3q6928.d
5:D:\MassHunter\Data\0805_537_S3Q141\3q6929.d
6:D:\MassHunter\Data\0805_537_S3Q141\3q6930.d
7:D:\MassHunter\Data\0805_537_S3Q141\3q6931.d
8:D:\MassHunter\Data\0805_537_S3Q141\3q6932.d

Data File: 3q7035
Type : QC
Level : 7

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	50.000	52.093	4.2	104.2
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	50.000	51.045	2.1	102.1
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	50.000	47.711	-4.6	95.4
6:2FTS	50.000	46.361	-7.3	92.7
8:2FTS	50.000	46.325	-7.3	92.7
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	50.000	50.260	0.5	100.5
EtFOSAA	50.000	49.910	-0.2	99.8
FOSA	50.000	48.123	-3.8	96.2
MeFOSAA	50.000	49.904	-0.2	99.8
PFBA	50.000	49.609	-0.8	99.2
PFBS	50.000	49.406	-1.2	98.8
PFDA	50.000	52.298	4.6	104.6
PFDoDA	50.000	50.390	0.8	100.8
PFDS	50.000	50.221	0.4	100.4
PFHpA	50.000	49.362	-1.3	98.7
PFHpS	50.000	51.137	2.3	102.3
PFHxA	50.000	50.293	0.6	100.6
PFHxS	50.000	50.187	0.4	100.4
PFNA	50.000	51.052	2.1	102.1
PFNS	50.000	50.095	0.2	100.2
PFOA	50.000	50.374	0.7	100.7
PFOS	50.000	49.732	-0.5	99.5
PFPeA	50.000	49.791	-0.4	99.6
PFPeS	50.000	49.896	-0.2	99.8
PFTeDA	50.000	50.533	1.1	101.1
PFTTrDA	50.000	50.480	1.0	101.0
PFUnDA	50.000	50.405	0.8	100.8
ADONA	50.000	49.061	-1.9	98.1
9Cl-PF3ONS	50.000	49.558	-0.9	99.1
11Cl-PF3OUdS	50.000	49.213	-1.6	98.4
13C3-HFPO-DA	250.000	257.840	3.1	103.1

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q144-CC141
Lab FileID: 3Q7035.D

HFPO-DA	250.000	252.409	1.0	101.0
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CC Criteria: +/- 25%

Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q147-ICC147
 Lab FileID: 3Q7242.D

Initial Calibration Report

Method Path	D:\MassHunter\Methods											
Method File	537_081319_S3Q147B.quantmethod.xml											
Batch Name	D:\MassHunter\Data\0813_537_S3Q147\QuantResults\S3Q147_batch.bin											
Last Calib Update	8/13/2019 2:15:31 PM											
Level Name	Calibration Files	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
1	D:\MassHunter\Data\0813_537_S3Q147\3q7237.d	Quadratic	0.7598	0.7878	0.8157	0.8624	0.8014	0.8237	0.7246	0.6631	0.7798	8.057
2	D:\MassHunter\Data\0813_537_S3Q147\3q7238.d	Quadratic	0.9785	0.9714	1.0143	1.0712	1.0213	1.0300	0.8912	0.7867	0.9706	9.406
3	D:\MassHunter\Data\0813_537_S3Q147\3q7239.d	Quadratic	0.9219	0.9771	0.9453	1.0631	0.9811	0.9961	0.8485	0.7337	0.9333	10.889
4	D:\MassHunter\Data\0813_537_S3Q147\3q7240.d	Linear	0.6971	0.7421	0.7501	0.8263	0.7836	0.8079	0.7412	0.7160	0.7580	5.871
5	D:\MassHunter\Data\0813_537_S3Q147\3q7241.d	Linear	0.8170	0.8678	0.8854	0.9624	0.9210	0.9585	0.8883	0.8792	0.8974	5.396
6	D:\MassHunter\Data\0813_537_S3Q147\3q7242.d	Linear	0.9741	1.0182	1.0430	1.1221	1.0895	1.1153	1.0466	1.0447	1.0567	4.734
7	D:\MassHunter\Data\0813_537_S3Q147\3q7243.d	Linear	1.1125	1.1421	1.2112	1.3396	1.2995	1.3330	1.2543	1.2517	1.2430	6.733
8	D:\MassHunter\Data\0813_537_S3Q147\3q7244.d	Linear	0.6601	0.6299	0.6551	0.7033	0.6764	0.6889	0.6453	0.6446	0.6629	3.737
I 13C2-PFOA	S 13C2-PFHXA	Linear	0.3083	0.3410	0.3446	0.3710	0.3530	0.3689	0.3469	0.3465	0.3475	5.576
T PFHXA	T HFPO-DA	Quadratic	0.1649	0.1693	0.1708	0.1879	0.1727	0.1760	0.1564	0.1432	0.1676	7.965
S 13C3-HFPO-DA	T PFHpA	Quadratic	0.0559	0.0513	0.0528	0.0555	0.0511	0.0516	0.0466	0.0435	0.0510	8.221
T PFHpA	T ADONA	Linear	1.0860	1.1133	1.1252	1.2343	1.1769	1.2143	1.1473	1.1473	1.1556	4.362
T ADONA	T PFOA	Linear	1.2184	1.3090	1.3171	1.4299	1.3577	1.3980	1.3282	1.3553	1.3367	4.743
T PFOA	T PFNA	Linear	0.8258	0.8489	0.8718	0.9328	0.9050	0.9227	0.8604	0.8399	0.8759	4.539
T PFNA	T 9C-HPF3ONS	Linear	0.9579	1.0090	1.0457	1.1251	1.0915	1.1008	1.0240	1.0149	1.0461	5.348
T 9C-HPF3ONS	S 13C2-PFDA	Linear	0.1404	0.1445	0.1384	0.1546	0.1535	0.1553	0.1473	0.1463	0.1475	4.373
S 13C2-PFDA	T PFDA	Linear	1.2438	1.1547	1.1855	1.2867	1.1947	1.2212	1.1159	1.0632	1.1832	6.037
T PFDA	T 11C1-PF3OUs	Linear	1.0190	1.0824	1.0815	1.1792	1.1234	1.1261	1.0300	0.9869	1.0786	5.941
T 11C1-PF3OUs	I 13C3-PFPeA	Linear	0.5645	0.5989	0.5884	0.6457	0.6197	0.6440	0.6064	0.6104	0.6097	4.471
I 13C3-PFPeA	T PFPeA	Linear	1.1860	1.2364	1.2458	1.3542	1.2901	1.3267	1.2442	1.2138	1.2621	4.524
T PFPeA	T PFBS	Linear	0.2062	0.2214	0.2163	0.2311	0.2222	0.2211	0.2084	0.2032	0.2162	4.420
I 13C4-PFOS	T PFBS	Linear	0.8277	0.8546	0.8707	0.9310	0.8866	0.9264	0.8729	0.8669	0.8796	3.959

Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q147-ICC147
 Lab FileID: 3Q7242.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
T PFHXS	Linear	0.8436	0.8588	0.8778	0.9390	0.9034	0.9425	0.8772	0.8606	0.8879	4.170
T PFHpS	Linear	0.8235	0.8175	0.8143	0.8853	0.8548	0.8820	0.8255	0.7908	0.8367	4.046
T PFOS	Linear	1.0617	1.0444	1.0946	1.1743	1.0929	1.1375	1.0694	1.0407	1.0894	4.267
T PFNS	Linear	0.7364	0.7722	0.7855	0.8246	0.8022	0.8279	0.7638	0.7177	0.7788	5.066
T PFDS	Linear	0.2143	0.2173	0.2143	0.2406	0.2285	0.2358	0.2142	0.2076	0.2216	5.361
I d3-MeFOSAA	Quadratic	1.7336	1.8331	1.7835	1.9702	1.7989	1.8332	1.6057	1.4517	1.7513	9.053
T FOSA	Linear	0.9821	1.0267	1.0965	1.1184	1.0831	1.0992	1.0362	1.0288	1.0589	4.448
S d5-EFOSAA	Quadratic	1.1543	0.9043	0.9831	1.0302	0.9880	0.9704	0.8986	0.8600	0.9736	9.467
T E1FOSAA	Linear	0.8301	0.9533	0.9469	1.0073	0.9978	0.9803	0.9018	0.8781	0.9370	6.630

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: S3Q147-ICC147
 Lab FileID: 3Q7242.D

Initial Calibration Report

Compounds with Curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T PFPeA	Linear	$y = 1.223936 * x$	0.999436
T PFBS	Linear	$y = 0.870122 * x$	0.999765
T 4:2FTS	Quadratic	$y = -0.029946 * x^2 + 0.811694 * x$	0.999691
S 13C2-PFHxA	Linear	$y = 0.646476 * x$	0.999739
T PFHxA	Linear	$y = 0.347360 * x$	0.999795
T PFPeS	Linear	$y = 0.204936 * x$	0.999398
T HFPO-DA	Quadratic	$y = -0.001259 * x^2 + 0.174497 * x$	0.999750
S 13C3-HFPO-DA	Quadratic	$y = -3.040370E-004 * x^2 + 0.051064 * x$	0.999776
T PFHpA	Linear	$y = 1.149755 * x$	0.999823
T PFHxS	Linear	$y = 0.866814 * x$	0.999496
T ADONA	Linear	$y = 1.336196 * x$	0.999871
T 6:2FTS	Quadratic	$y = -0.048504 * x^2 + 1.027704 * x$	0.999677
T PFOA	Linear	$y = 0.847095 * x$	0.999379
T PFHpS	Linear	$y = 0.800925 * x$	0.998957
T PFOs	Linear	$y = 1.049853 * x$	0.999417
T PFNA	Linear	$y = 1.020091 * x$	0.999580
T FOSA	Quadratic	$y = -0.073634 * x^2 + 1.817204 * x$	0.999676
T 9CHPF3ONS	Linear	$y = 0.146864 * x$	0.999794
T PFNS	Linear	$y = 0.730819 * x$	0.997996
S 13C2-PFDA	Linear	$y = 1.079631 * x$	0.998310
T PFDA	Linear	$y = 1.000863 * x$	0.998486
T 8:2FTS	Quadratic	$y = -0.052787 * x^2 + 0.996118 * x$	0.999591
T MeFOSAA	Linear	$y = 1.033031 * x$	0.999735
S d5-EFOSAA	Quadratic	$y = -0.020553 * x^2 + 0.961632 * x$	0.999846
T EtFOSAA	Linear	$y = 0.886985 * x$	0.999028
T PFDS	Linear	$y = 0.209916 * x$	0.998848
T PFUnDA	Linear	$y = 0.724417 * x$	0.998912
T 11Cl-PF3OUdS	Linear	$y = 0.610818 * x$	0.999833
T PFDoDA	Linear	$y = 0.883896 * x$	0.999580
T PFTfDA	Linear	$y = 1.047706 * x$	0.999761
T PFTeDA	Linear	$y = 1.255192 * x$	0.999780

(Redfont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q147-ICV147
Lab FileID: 3Q7246.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0813_537_S3Q147\S3Q147.batch.bin

Level ID: Calibration File
1:D:\MassHunter\Data\0813_537_S3Q147\3q7237.d
2:D:\MassHunter\Data\0813_537_S3Q147\3q7238.d
3:D:\MassHunter\Data\0813_537_S3Q147\3q7239.d
4:D:\MassHunter\Data\0813_537_S3Q147\3q7240.d
5:D:\MassHunter\Data\0813_537_S3Q147\3q7241.d
6:D:\MassHunter\Data\0813_537_S3Q147\3q7242.d
7:D:\MassHunter\Data\0813_537_S3Q147\3q7243.d
8:D:\MassHunter\Data\0813_537_S3Q147\3q7244.d

Data File: 3q7246
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	0.000	0.000	0.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	0.000	0.000	0.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	18.615	-6.9	93.1
6:2FTS	20.000	18.936	-5.3	94.7
8:2FTS	20.000	18.942	-5.3	94.7
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	0.000	0.000	0.0	193.5
EtFOSAA	20.000	21.350	6.7	106.7
FOSA	20.000	19.532	-2.3	97.7
MeFOSAA	20.000	20.089	0.4	100.4
PFBS	20.000	17.441	-12.8	87.2
PFDA	20.000	20.279	1.4	101.4
PFDoDA	20.000	20.464	2.3	102.3
PFDS	20.000	19.924	-0.4	99.6
PFHpA	20.000	20.107	0.5	100.5
PFHpS	20.000	19.531	-2.3	97.7
PFHxA	20.000	18.300	-8.5	91.5
PFHxS	20.000	17.095	-14.5	85.5
PFNA	20.000	18.740	-6.3	93.7
PFNS	20.000	21.094	5.5	105.5
PFOA	20.000	19.974	-0.1	99.9
PFOS	20.000	21.422	7.1	107.1
PFPeA	20.000	19.507	-2.5	97.5
PFPeS	20.000	18.468	-7.7	92.3
PFTeDA	20.000	18.594	-7.0	93.0
PFTrDA	20.000	22.434	12.2	112.2
PFUnDA	20.000	22.144	10.7	110.7
ADONA	20.000	0.000	# -100.0	0.0
9C1-PF3ONS	20.000	0.000	# -100.0	0.0
11C1-PF3OUds	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	0.000	0.000	0.0	255.7
HFPO-DA	100.000	0.000	# -100.0	0.0

6.6.11
6

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q147-ICV147
Lab FileID: 3Q7246.D

CC Criteria: +/- 25%

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q147-ICV147
Lab FileID: 3Q7247.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0813_537_S3Q147\S3Q147.batch.bin

Level ID: Calibration File
1:D:\MassHunter\Data\0813_537_S3Q147\3q7237.d
2:D:\MassHunter\Data\0813_537_S3Q147\3q7238.d
3:D:\MassHunter\Data\0813_537_S3Q147\3q7239.d
4:D:\MassHunter\Data\0813_537_S3Q147\3q7240.d
5:D:\MassHunter\Data\0813_537_S3Q147\3q7241.d
6:D:\MassHunter\Data\0813_537_S3Q147\3q7242.d
7:D:\MassHunter\Data\0813_537_S3Q147\3q7243.d
8:D:\MassHunter\Data\0813_537_S3Q147\3q7244.d

Data File: 3q7247
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	0.000	# -100.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	0.000	# -100.0	0.0
EtFOSAA	20.000	18.342	-8.3	91.7
FOSA	20.000	0.000	# -100.0	0.0
MeFOSAA	20.000	17.651	-11.7	88.3
PFBS	20.000	19.400	-3.0	97.0
PFDA	20.000	21.195	6.0	106.0
PFDoDA	20.000	19.324	-3.4	96.6
PFDS	20.000	0.000	# -100.0	0.0
PFHpA	20.000	18.585	-7.1	92.9
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	19.197	-4.0	96.0
PFHxS	20.000	19.176	-4.1	95.9
PFNA	20.000	19.987	-0.1	99.9
PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	19.540	-2.3	97.7
PFOS	20.000	20.605	3.0	103.0
PFPeA	20.000	0.000	# -100.0	0.0
PFPeS	20.000	0.000	# -100.0	0.0
PFTeDA	20.000	19.027	-4.9	95.1
PFTTrDA	20.000	20.119	0.6	100.6
PFUnDA	20.000	21.333	6.7	106.7
ADONA	20.000	19.671	-1.6	98.4
9Cl-PF3ONS	20.000	18.996	-5.0	95.0
11Cl-PF3OUds	20.000	19.040	-4.8	95.2
13C3-HFPO-DA	100.000	0.000	# -100.0	0.0
HFPO-DA	20.000	19.676	-1.6	98.4

6.6.12
6

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q147-ICV147
Lab FileID: 3Q7247.D

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q147-CC147
Lab FileID: 3Q7256.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0813_537_S3Q147\S3Q147.batch.bin

Level ID: Calibration File
1:D:\MassHunter\Data\0813_537_S3Q147\3q7237.d
2:D:\MassHunter\Data\0813_537_S3Q147\3q7238.d
3:D:\MassHunter\Data\0813_537_S3Q147\3q7239.d
4:D:\MassHunter\Data\0813_537_S3Q147\3q7240.d
5:D:\MassHunter\Data\0813_537_S3Q147\3q7241.d
6:D:\MassHunter\Data\0813_537_S3Q147\3q7242.d
7:D:\MassHunter\Data\0813_537_S3Q147\3q7243.d
8:D:\MassHunter\Data\0813_537_S3Q147\3q7244.d

Data File: 3q7256
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	22.717	13.6	113.6
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	21.386	6.9	106.9
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	21.053	5.3	105.3
6:2FTS	20.000	20.921	4.6	104.6
8:2FTS	20.000	21.145	5.7	105.7
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	22.094	10.5	110.5
EtFOSAA	20.000	23.323	16.6	116.6
FOSA	20.000	20.758	3.8	103.8
MeFOSAA	20.000	21.576	7.9	107.9
PFBS	20.000	20.531	2.7	102.7
PFDA	20.000	22.845	14.2	114.2
PFDoDA	20.000	21.573	7.9	107.9
PFDS	20.000	22.204	11.0	111.0
PFHpA	20.000	20.887	4.4	104.4
PFHpS	20.000	22.210	11.1	111.1
PFHxA	20.000	21.464	7.3	107.3
PFHxS	20.000	21.501	7.5	107.5
PFNA	20.000	21.504	7.5	107.5
PFNS	20.000	22.505	12.5	112.5
PFOA	20.000	22.014	10.1	110.1
PFOS	20.000	21.989	9.9	109.9
PFPeA	20.000	21.694	8.5	108.5
PFPeS	20.000	21.900	9.5	109.5
PFTeDA	20.000	21.038	5.2	105.2
PFTTrDA	20.000	21.222	6.1	106.1
PFUnDA	20.000	21.993	10.0	110.0
ADONA	20.000	20.800	4.0	104.0
9Cl-PF3ONS	20.000	21.276	6.4	106.4
11Cl-PF3OUds	20.000	20.822	4.1	104.1
13C3-HFPO-DA	100.000	98.954	-1.0	99.0
HFPO-DA	100.000	99.464	-0.5	99.5

6.6.13
6

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: S3Q147-CC147
Lab FileID: 3Q7256.D

CC Criteria: +/- 25%

6.6.13

6

Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: SQ1412-ICC1412
 Lab FileID: Q62294.D

Initial Calibration Report

Method Path D:\MassHunter\demethods
 Method File 537_081319_SQ1412_quantmethod.xml
 Batch Name D:\MassHunter\Data\0813_537_SQ1412\QuantResults\SQ1412_batch.bin
 Last Calib Update 8/14/2019 7:29:42 AM

Calibration Files

1 D:\MassHunter\Data\0813_537_SQ1412\Q62289.d
 2 D:\MassHunter\Data\0813_537_SQ1412\Q62290.d
 3 D:\MassHunter\Data\0813_537_SQ1412\Q62291.d
 4 D:\MassHunter\Data\0813_537_SQ1412\Q62292.d
 5 D:\MassHunter\Data\0813_537_SQ1412\Q62293.d
 6 D:\MassHunter\Data\0813_537_SQ1412\Q62294.d
 7 D:\MassHunter\Data\0813_537_SQ1412\Q62295.d
 8 D:\MassHunter\Data\0813_537_SQ1412\Q62296.d

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I 13C2-6:2FTS											
T 4:2FTS	Avg RF	1.2424	1.3609	1.3266	1.4181	1.3835	1.4955	1.2425	1.1411	1.3263	8.544
T 6:2FTS	Avg RF	1.0250	1.0193	1.0304	1.0873	1.0111	1.0672	0.8938	0.7939	0.9910	9.893
T 8:2FTS	Quadratic	0.6355	0.6861	0.7356	0.7618	0.6484	0.6838	0.5493	0.4791	0.6475	14.509
I 13C2-PFDoDA											
T PFUoDA	Linear	0.7302	0.7068	0.7236	0.7503	0.7432	0.7472	0.6748	0.6450	0.7151	5.278
T PFDoDA	Linear	0.8340	0.8970	0.8919	0.9645	0.9422	0.9974	0.9078	0.8999	0.9169	5.476
T PFTfDA	Linear	1.2661	1.3120	1.3077	1.4151	1.3901	1.4418	1.3324	1.3005	1.3457	4.629
T PFTeDA	Linear	1.2396	1.3219	1.3694	1.4783	1.4499	1.5270	1.4434	1.4556	1.4106	6.649
I 13C2-PFOA											
T PFBA	Linear	0.4618	0.4883	0.4985	0.5403	0.5256	0.5788	0.5442	0.5728	0.5263	7.804
S 13C2-PFHA	Linear	0.8233	0.7409	0.7771	0.8073	0.7798	0.8501	0.7708	0.7674	0.7896	4.433
T PFHXA	Linear	0.5657	0.6369	0.6052	0.6797	0.6588	0.7148	0.6417	0.6502	0.6441	6.999
T HFPO-DA	Quadratic	0.2209	0.2191	0.2227	0.2348	0.2171	0.2182	0.1810	0.1632	0.2096	11.586
S 13C3-HFPO-DA	Quadratic	0.1861	0.1641	0.1699	0.1748	0.1589	0.1603	0.1296	0.1194	0.1579	14.266
T PFHpA	Linear	0.8259	0.8777	0.8951	0.9885	0.9369	1.0207	0.9398	0.9350	0.9274	6.643
T ADONA	Linear	0.8659	0.9476	0.9881	1.0650	1.0301	1.1269	1.0421	1.0426	1.0135	7.843
T PFOA	Linear	0.9723	0.9642	0.9562	1.0274	0.9564	1.0287	0.9257	0.9150	0.9682	4.296
T PFNA	Linear	0.6479	0.7038	0.6712	0.7322	0.6806	0.7009	0.6173	0.6079	0.6702	6.479
T 9C-HF3ONS	Avg RF	0.1762	0.1988	0.2074	0.2118	0.2255	0.1963	0.1963	0.1783	0.2032	9.821
S 13C2-PFDA	Avg RF	0.8193	0.7861	0.8034	0.8360	0.7422	0.7574	0.6220	0.5719	0.7423	12.891
T PFDA	Quadratic	0.7652	0.7935	0.8410	0.8456	0.7666	0.7695	0.6407	0.5914	0.7517	12.034
T 11C1-PF3OIdS	Linear	0.7437	0.7649	0.7586	0.7960	0.7900	0.8629	0.7648	0.6857	0.7708	6.520
I 13C3-PFPeA											
T PFPeA	Linear	0.8096	0.8385	0.8301	0.8839	0.8672	0.9131	0.8231	0.8170	0.8478	4.313
T PFPeS	Avg RF	0.2870	0.3214	0.3061	0.3266	0.3117	0.3155	0.2721	0.2413	0.2977	9.775

Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: SQ1412-ICC1412
 Lab FileID: Q62294.D

Initial Calibration Report

Compound	Curve Fit	1	2	3	4	5	6	7	8	Avg RF	%RSD
I 13C4-PFOS											
T PFBS	Linear	0.7614	0.7721	0.7870	0.8754	0.8433	0.9122	0.8557	0.9099	0.8396	7.147
T PFHxS	Linear	0.6826	0.7238	0.7093	0.7949	0.7286	0.7736	0.6789	0.7015	0.7241	5.711
T PFHpS	Avg RF	0.6009	0.5952	0.6086	0.6844	0.6226	0.6380	0.5564	0.5287	0.6044	7.916
T PFOS	Linear	1.0926	1.0084	1.0615	1.2059	1.0922	1.1836	1.1192	1.1496	1.1141	5.819
T PONS	Quadratic	0.6799	0.6985	0.7512	0.7640	0.7026	0.7179	0.5959	0.5449	0.6819	11.045
T PFDS	Linear	0.2437	0.2441	0.2815	0.2911	0.2974	0.2898	0.2541	0.2389	0.2676	9.214
I d3-MeFOSAA											
T FOSA	Quadratic	4.2153	4.9921	4.4959	5.0532	4.8923	5.1091	4.3855	3.6074	4.5939	11.322
T MeFOSAA	Linear	0.9771	1.2815	1.1630	1.1243	1.1716	1.1853	1.0648	1.0044	1.1215	9.023
S d5-EFOSAA	Linear	1.0314	1.0313	1.0028	1.0872	1.0699	1.1237	1.0735	1.0360	1.0570	3.665
T EtFOSAA	Linear	0.8933	1.1913	1.0999	1.0792	1.0883	1.2202	1.1144	1.0729	1.0950	8.921

(Redfont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: SQ1412-ICC1412
 Lab FileID: Q62294.D

Initial Calibration Report

Compounds with curve fitting not using Avg Response Factor:

Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T PFBA	Linear	$y = 0.567008 * x$	0.999318
T PFPEA	Linear	$y = 0.821683 * x$	0.999324
T PFBS	Linear	$y = 0.898972 * x$	0.999096
S 13C2-PFHxA	Linear	$y = 0.770761 * x$	0.999470
T PFHxA	Linear	$y = 0.650645 * x$	0.999477
T HFPO-DA	Quadratic	$y = -0.001928 * x^2 + 0.210805 * x$	0.998995
S 13C3-HFO-DA	Quadratic	$y = -0.001290 * x^2 + 0.151106 * x$	0.998333
T PFHpA	Linear	$y = 0.938616 * x$	0.999612
T PFHxS	Linear	$y = 0.699735 * x$	0.999134
T ADONA	Linear	$y = 1.044988 * x$	0.999697
T PFOA	Linear	$y = 0.921062 * x$	0.999237
T PFOS	Linear	$y = 1.144407 * x$	0.999745
T PFNA	Linear	$y = 0.613407 * x$	0.998659
T FOSA	Quadratic	$y = -0.325951 * x^2 + 5.234347 * x$	0.999788
T PFNS	Quadratic	$y = -0.028828 * x^2 + 0.687167 * x$	0.998961
T MeFOSAA	Linear	$y = 1.023162 * x$	0.997597
T PFDA	Quadratic	$y = -0.029358 * x^2 + 0.736009 * x$	0.998857
T 8:2FTS	Quadratic	$y = -0.036288 * x^2 + 0.658717 * x$	0.998620
S d5-EFOSAA	Linear	$y = 1.046246 * x$	0.999418
T EFOSAA	Linear	$y = 1.085534 * x$	0.998903
T PFDS	Linear	$y = 0.243977 * x$	0.996549
T PFUnDA	Linear	$y = 0.654822 * x$	0.998211
T 11Cl-PF3OUdS	Linear	$y = 0.707347 * x$	0.994326
T PFDoDA	Linear	$y = 0.904868 * x$	0.999436
T PFTDA	Linear	$y = 1.311868 * x$	0.999315
T PFTeDA	Linear	$y = 1.455437 * x$	0.999863

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Initial Calibration Verification

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: SQ1412-ICV1412
 Lab FileID: Q62298.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0813_537_SQ1412\SQ1412.batch.bin

Level ID: Calibration File
 1:D:\MassHunter\Data\0813_537_SQ1412\Q62289.d
 2:D:\MassHunter\Data\0813_537_SQ1412\Q62290.d
 3:D:\MassHunter\Data\0813_537_SQ1412\Q62291.d
 4:D:\MassHunter\Data\0813_537_SQ1412\Q62292.d
 5:D:\MassHunter\Data\0813_537_SQ1412\Q62293.d
 6:D:\MassHunter\Data\0813_537_SQ1412\Q62294.d
 7:D:\MassHunter\Data\0813_537_SQ1412\Q62295.d
 8:D:\MassHunter\Data\0813_537_SQ1412\Q62296.d

Data File: Q62298
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	0.000	0.000	0.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	0.000	0.000	0.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	18.801	-6.0	94.0
6:2FTS	20.000	19.037	-4.8	95.2
8:2FTS	20.000	18.273	-8.6	91.4
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	0.000	0.000	0.0	102.9
EtFOSAA	20.000	19.304	-3.5	96.5
FOSA	20.000	17.824	-10.9	89.1
MeFOSAA	20.000	20.682	3.4	103.4
PFBA	20.000	18.587	-7.1	92.9
PFBS	20.000	16.335	-18.3	81.7
PFDA	20.000	19.603	-2.0	98.0
PFDoDA	20.000	20.364	1.8	101.8
PFDS	20.000	21.232	6.2	106.2
PFHpA	20.000	19.990	-0.1	99.9
PFHpS	20.000	17.944	-10.3	89.7
PFHxA	20.000	18.383	-8.1	91.9
PFHxS	20.000	16.970	-15.2	84.8
PFNA	20.000	19.184	-4.1	95.9
PFNS	20.000	19.688	-1.6	98.4
PFOA	20.000	19.628	-1.9	98.1
PFOS	20.000	19.493	-2.5	97.5
PFPeA	20.000	19.142	-4.3	95.7
PFPeS	20.000	17.684	-11.6	88.4
PFTeDA	20.000	18.448	-7.8	92.2
PFTTrDA	20.000	22.665	13.3	113.3
PFUnDA	20.000	22.659	13.3	113.3
ADONA	20.000	0.000	# -100.0	0.0
9Cl-PF3ONS	20.000	0.000	# -100.0	0.0
11Cl-PF3OUdS	20.000	0.000	# -100.0	0.0
13C3-HFPO-DA	0.000	0.000	0.0	97.3

6.6.15
6

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: SQ1412-ICV1412
Lab FileID: Q62298.D

HFPO-DA	100.000	0.000	#	-100.0	0.0
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CC Criteria: +/- 25%

6.6.15

6

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: SQ1412-ICV1412
Lab FileID: Q62299.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0813_537_SQ1412\SQ1412.batch.bin

Level ID: Calibration File
1:D:\MassHunter\Data\0813_537_SQ1412\Q62289.d
2:D:\MassHunter\Data\0813_537_SQ1412\Q62290.d
3:D:\MassHunter\Data\0813_537_SQ1412\Q62291.d
4:D:\MassHunter\Data\0813_537_SQ1412\Q62292.d
5:D:\MassHunter\Data\0813_537_SQ1412\Q62293.d
6:D:\MassHunter\Data\0813_537_SQ1412\Q62294.d
7:D:\MassHunter\Data\0813_537_SQ1412\Q62295.d
8:D:\MassHunter\Data\0813_537_SQ1412\Q62296.d

Data File: Q62299
Type : QC
Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	0.000	# -100.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	0.000	# -100.0	0.0
6:2FTS	20.000	0.000	# -100.0	0.0
8:2FTS	20.000	0.000	# -100.0	0.0
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	0.000	# -100.0	0.0
EtFOSAA	20.000	16.275	-18.6	81.4
FOSA	20.000	0.000	# -100.0	0.0
MeFOSAA	20.000	18.157	-9.2	90.8
PFBA	20.000	0.000	# -100.0	0.0
PFBS	20.000	18.345	-8.3	91.7
PFDA	20.000	21.211	6.1	106.1
PFDoDA	20.000	18.997	-5.0	95.0
PFDS	20.000	0.000	# -100.0	0.0
PFHpA	20.000	17.816	-10.9	89.1
PFHpS	20.000	0.000	# -100.0	0.0
PFHxA	20.000	19.004	-5.0	95.0
PFHxS	20.000	19.568	-2.2	97.8
PFNA	20.000	20.736	3.7	103.7
PFNS	20.000	0.000	# -100.0	0.0
PFOA	20.000	19.334	-3.3	96.7
PFOS	20.000	19.208	-4.0	96.0
PFPeA	20.000	0.000	# -100.0	0.0
PFPeS	20.000	0.000	# -100.0	0.0
PFTeDA	20.000	17.737	-11.3	88.7
PFTTrDA	20.000	19.877	-0.6	99.4
PFUnDA	20.000	21.846	9.2	109.2
ADONA	20.000	18.736	-6.3	93.7
9Cl-PF3ONS	20.000	18.548	-7.3	92.7
11Cl-PF3OUdS	20.000	20.355	1.8	101.8
13C3-HFPO-DA	100.000	0.000	# -100.0	0.0

6.6.16
6

Initial Calibration Verification

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: SQ1412-ICV1412
Lab FileID: Q62299.D

HFPO-DA	20.000	22.536	12.7	112.7
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CC Criteria: +/- 25%

6.6.16

6

Continuing Calibration Summary

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Sample: SQ1412-CC1412
 Lab FileID: Q62309.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0813_537_SQ1412\SQ1412.batch.bin

Level ID: Calibration File
 1:D:\MassHunter\Data\0813_537_SQ1412\Q62289.d
 2:D:\MassHunter\Data\0813_537_SQ1412\Q62290.d
 3:D:\MassHunter\Data\0813_537_SQ1412\Q62291.d
 4:D:\MassHunter\Data\0813_537_SQ1412\Q62292.d
 5:D:\MassHunter\Data\0813_537_SQ1412\Q62293.d
 6:D:\MassHunter\Data\0813_537_SQ1412\Q62294.d
 7:D:\MassHunter\Data\0813_537_SQ1412\Q62295.d
 8:D:\MassHunter\Data\0813_537_SQ1412\Q62296.d

Data File: Q62309
 Type : QC
 Level : 6

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-6:2FTS	---	--ISTD--		
13C2-PFDA	20.000	20.613	3.1	103.1
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	23.054	15.3	115.3
13C2-PFOA	---	--ISTD--		
13C3-PFPeA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
4:2FTS	20.000	22.795	14.0	114.0
6:2FTS	20.000	21.839	9.2	109.2
8:2FTS	20.000	23.926	19.6	119.6
d3-MeFOSAA	---	--ISTD--		
d5-EtFOSAA	20.000	22.024	10.1	110.1
EtFOSAA	20.000	20.817	4.1	104.1
FOSA	20.000	20.579	2.9	102.9
MeFOSAA	20.000	22.553	12.8	112.8
PFBA	20.000	21.493	7.5	107.5
PFBS	20.000	21.415	7.1	107.1
PFDA	20.000	22.360	11.8	111.8
PFDoDA	20.000	22.153	10.8	110.8
PFDS	20.000	24.947	24.7	124.7
PFHpA	20.000	21.953	9.8	109.8
PFHpS	20.000	22.183	10.9	110.9
PFHxA	20.000	22.853	14.3	114.3
PFHxS	20.000	22.726	13.6	113.6
PFNA	20.000	23.546	17.7	117.7
PFNS	20.000	22.372	11.9	111.9
PFOA	20.000	22.381	11.9	111.9
PFOS	20.000	21.471	7.4	107.4
PFPeA	20.000	21.319	6.6	106.6
PFPeS	20.000	20.448	2.2	102.2
PFTeDA	20.000	20.891	4.5	104.5
PFTTrDA	20.000	21.925	9.6	109.6
PFUnDA	20.000	22.485	12.4	112.4
ADONA	20.000	21.889	9.4	109.4
9Cl-PF3ONS	20.000	21.349	6.7	106.7
11Cl-PF3OUdS	20.000	24.688	23.4	123.4
13C3-HFPO-DA	100.000	114.115	14.1	114.1

6.6.17
6

Continuing Calibration Summary

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Sample: SQ1412-CC1412
Lab FileID: Q62309.D

HFPO-DA	100.000	110.323	10.3	110.3
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CC Criteria: +/- 25%

Run Sequence Report

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Run ID: S3Q141	Method: EPA 537.1 REV 1.0	Instrument ID: GCMS3Q
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S3Q141-IC141	3Q6925.D	08/05/19 11:04	n/a	Initial cal 0.5
S3Q141-IC141	3Q6926.D	08/05/19 11:20	n/a	Initial cal 1.0
S3Q141-IC141	3Q6927.D	08/05/19 11:35	n/a	Initial cal 2.0
S3Q141-IC141	3Q6928.D	08/05/19 11:51	n/a	Initial cal 5.0
S3Q141-IC141	3Q6929.D	08/05/19 12:07	n/a	Initial cal 10
S3Q141-ICC141	3Q6930.D	08/05/19 12:22	n/a	Initial cal 20
S3Q141-IC141	3Q6931.D	08/05/19 12:39	n/a	Initial cal 50
S3Q141-IC141	3Q6932.D	08/05/19 13:07	n/a	Initial cal 100
S3Q141-ICV141	3Q6934.D	08/05/19 13:39	n/a	Initial cal verification 20
S3Q141-ICV141	3Q6935.D	08/05/19 13:54	n/a	Initial cal verification 20
OP76197-BS	3Q6936.D	08/05/19 14:10	OP76197	Blank Spike
OP76197-MB	3Q6937.D	08/05/19 14:25	OP76197	Method Blank
ZZZZZZ	3Q6938.D	08/05/19 14:41	OP76197	(unrelated sample)
ZZZZZZ	3Q6939.D	08/05/19 14:57	OP76197	(unrelated sample)
ZZZZZZ	3Q6940.D	08/05/19 15:12	OP76197	(unrelated sample)
ZZZZZZ	3Q6941.D	08/05/19 15:28	OP76197	(unrelated sample)
ZZZZZZ	3Q6942.D	08/05/19 15:43	OP76197	(unrelated sample)
ZZZZZZ	3Q6943.D	08/05/19 15:59	OP76197	(unrelated sample)
ZZZZZZ	3Q6944.D	08/05/19 16:15	OP76197	(unrelated sample)
ZZZZZZ	3Q6945.D	08/05/19 16:30	OP76197	(unrelated sample)
S3Q141-CC141	3Q6946.D	08/05/19 16:46	n/a	Continuing cal 50
ZZZZZZ	3Q6948.D	08/05/19 17:17	OP76197	(unrelated sample)
ZZZZZZ	3Q6949.D	08/05/19 17:33	OP76197	(unrelated sample)
ZZZZZZ	3Q6950.D	08/05/19 17:48	OP76197	(unrelated sample)
FA66633-1	3Q6952.D	08/05/19 18:20	OP76197	(used for QC only; not part of job FA66397)
OP76197-MS	3Q6953.D	08/05/19 18:35	OP76197	Matrix Spike
FA66633-2	3Q6954.D	08/05/19 18:51	OP76197	(used for QC only; not part of job FA66397)
OP76197-DUP	3Q6955.D	08/05/19 19:07	OP76197	Duplicate
S3Q141-CC141	3Q6957.D	08/05/19 19:38	n/a	Continuing cal 20
S3Q141-ECC141	3Q6961.D	08/05/19 20:40	n/a	Ending cal 20

6.7.1
6

Run Sequence Report

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Run ID: S3Q143	Method: EPA 537.1 REV 1.0	Instrument ID: GCMS3Q
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S3Q143-CC141	3Q6973.D	08/07/19 09:18	n/a	Continuing cal 1.0
S3Q143-CC141	3Q6974.D	08/07/19 09:35	n/a	Continuing cal 20
OP76238-BS	3Q6975.D	08/07/19 09:53	OP76238	Blank Spike
OP76238-MB	3Q6976.D	08/07/19 10:09	OP76238	Method Blank
ZZZZZZ	3Q6977.D	08/07/19 10:24	OP76238	(unrelated sample)
ZZZZZZ	3Q6979.D	08/07/19 11:00	OP76238	(unrelated sample)
FA66703-1	3Q6980.D	08/07/19 11:18	OP76238	(used for QC only; not part of job FA66397)
OP76238-MS	3Q6981.D	08/07/19 11:33	OP76238	Matrix Spike
FA66706-1	3Q6982.D	08/07/19 11:48	OP76238	(used for QC only; not part of job FA66397)
OP76238-DUP	3Q6983.D	08/07/19 12:04	OP76238	Duplicate
S3Q143-CC141	3Q6985.D	08/07/19 12:35	n/a	Continuing cal 50
ZZZZZZ	3Q6988.D	08/07/19 13:22	OP76238	(unrelated sample)
ZZZZZZ	3Q6990.D	08/07/19 13:53	OP76238	(unrelated sample)
ZZZZZZ	3Q6993.D	08/07/19 14:40	OP76238	(unrelated sample)
ZZZZZZ	3Q6995.D	08/07/19 15:12	OP76238	(unrelated sample)
S3Q143-CC141	3Q6997.D	08/07/19 15:43	n/a	Continuing cal 20
OP76240-BS	3Q6999.D	08/07/19 16:14	OP76240	Blank Spike
OP76240-MB	3Q7000.D	08/07/19 16:30	OP76240	Method Blank
FA66397-1	3Q7001.D	08/07/19 16:45	OP76240	WI-CV-FCWTP-FB-INF200-072519
FA66397-2	3Q7002.D	08/07/19 17:01	OP76240	WI-CV-FCWTP-INF200-072519
FA66397-3	3Q7003.D	08/07/19 17:17	OP76240	WI-CV-FCWTP-MP205-072519
FA66397-4	3Q7004.D	08/07/19 17:32	OP76240	WI-CV-FCWTP-FB-205-072519
FA66397-5	3Q7005.D	08/07/19 17:48	OP76240	WI-CV-FCWTP-EF209-072519
FA66397-6	3Q7006.D	08/07/19 18:03	OP76240	WI-CV-FCWTP-FB-209-072519
FA66397-7	3Q7007.D	08/07/19 18:19	OP76240	WI-CV-FCWTP-FB-INF001-072519
FA66397-8	3Q7008.D	08/07/19 18:35	OP76240	WI-CV-FCWTP-INF001-072519
S3Q143-CC141	3Q7009.D	08/07/19 18:50	n/a	Continuing cal 50
FA66397-9	3Q7011.D	08/07/19 19:22	OP76240	WI-CV-FCWTP-INF001P-072519
FA66397-10	3Q7012.D	08/07/19 19:37	OP76240	WI-CV-FCWTP-FB-EF002-072519
ZZZZZZ	3Q7016.D	08/07/19 20:40	OP76240	(unrelated sample)
ZZZZZZ	3Q7017.D	08/07/19 20:55	OP76240	(unrelated sample)
ZZZZZZ	3Q7018.D	08/07/19 21:11	OP76240	(unrelated sample)
S3Q143-ECC141	3Q7020.D	08/07/19 21:42	n/a	Ending cal 20

6.7.2
6

Run Sequence Report

Job Number: FA66397
Account: ITVAVAB APTIM
Project: TCWTS; Coupeville, WA

Run ID: S3Q144	Method: EPA 537.1 REV 1.0	Instrument ID: GCMS3Q
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S3Q144-CC141	3Q7024.D	08/08/19 13:15	n/a	Continuing cal 1.0
S3Q144-CC141	3Q7025.D	08/08/19 13:31	n/a	Continuing cal 20
OP76240-MS	3Q7027.D	08/08/19 14:06	OP76240	Matrix Spike
OP76240-MSD	3Q7028.D	08/08/19 14:22	OP76240	Matrix Spike Duplicate
FA66397-11	3Q7033.D	08/08/19 15:40	OP76240	WI-CV-FCWTP-EF002-072519
S3Q144-CC141	3Q7035.D	08/08/19 16:11	n/a	Continuing cal 50
OP76241-BS	3Q7037.D	08/08/19 16:42	OP76241	Blank Spike
OP76241-MB	3Q7038.D	08/08/19 16:58	OP76241	Method Blank
FA66545-1	3Q7039.D	08/08/19 17:13	OP76241	(used for QC only; not part of job FA66397)
OP76241-DUP	3Q7040.D	08/08/19 17:29	OP76241	Duplicate
S3Q144-ECC141	3Q7042.D	08/08/19 18:00	n/a	Ending cal 20

6.7.3

6

Run Sequence Report

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Run ID: S3Q147	Method: EPA 537.1 REV 1.0	Instrument ID: GCMS3Q
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
S3Q147-IC147	3Q7237.D	08/13/19 10:41	n/a	Initial cal 0.5
S3Q147-IC147	3Q7238.D	08/13/19 10:56	n/a	Initial cal 1.0
S3Q147-IC147	3Q7239.D	08/13/19 11:12	n/a	Initial cal 2.0
S3Q147-IC147	3Q7240.D	08/13/19 11:28	n/a	Initial cal 5.0
S3Q147-IC147	3Q7241.D	08/13/19 12:06	n/a	Initial cal 10.0
S3Q147-ICC147	3Q7242.D	08/13/19 12:22	n/a	Initial cal 20
S3Q147-IC147	3Q7243.D	08/13/19 12:38	n/a	Initial cal 50
S3Q147-IC147	3Q7244.D	08/13/19 12:53	n/a	Initial cal 100
S3Q147-ICV147	3Q7246.D	08/13/19 13:40	n/a	Initial cal verification 20
S3Q147-ICV147	3Q7247.D	08/13/19 13:55	n/a	Initial cal verification 20
OP76319-BS	3Q7248.D	08/13/19 14:19	OP76319	Blank Spike
OP76319-MB	3Q7249.D	08/13/19 14:37	OP76319	Method Blank
FA66397-1	3Q7250.D	08/13/19 14:52	OP76319	WI-CV-FCWTP-FB-INF200-072519
FA66397-3	3Q7251.D	08/13/19 15:08	OP76319	WI-CV-FCWTP-MP205-072519
FA66397-5	3Q7252.D	08/13/19 15:24	OP76319	WI-CV-FCWTP-EF209-072519
FA66397-6	3Q7253.D	08/13/19 15:39	OP76319	WI-CV-FCWTP-FB-209-072519
FA66397-7	3Q7254.D	08/13/19 15:55	OP76319	WI-CV-FCWTP-FB-INF001-072519
FA66397-10	3Q7255.D	08/13/19 16:10	OP76319	WI-CV-FCWTP-FB-EF002-072519
S3Q147-CC147	3Q7256.D	08/13/19 16:36	n/a	Continuing cal 20
ZZZZZZ	3Q7261.D	08/13/19 17:54	OP76319	(unrelated sample)
ZZZZZZ	3Q7262.D	08/13/19 18:10	OP76319	(unrelated sample)
ZZZZZZ	3Q7263.D	08/13/19 18:26	OP76319	(unrelated sample)
ZZZZZZ	3Q7267.D	08/13/19 19:28	OP76319	(unrelated sample)
S3Q147-CC147	3Q7268.D	08/13/19 19:44	n/a	Continuing cal 20
ZZZZZZ	3Q7270.D	08/13/19 20:15	OP76319	(unrelated sample)
ZZZZZZ	3Q7271.D	08/13/19 20:31	OP76319	(unrelated sample)
OP76314-BS	3Q7273.D	08/13/19 21:02	OP76314	Blank Spike
OP76314-MB	3Q7274.D	08/13/19 21:17	OP76314	Method Blank
FA66626-1	3Q7275.D	08/13/19 21:33	OP76314	(used for QC only; not part of job FA66397)
OP76314-MS	3Q7276.D	08/13/19 21:49	OP76314	Matrix Spike
ZZZZZZ	3Q7277.D	08/13/19 22:04	OP76314	(unrelated sample)
ZZZZZZ	3Q7278.D	08/13/19 22:20	OP76314	(unrelated sample)
S3Q147-CC147	3Q7280.D	08/13/19 22:51	n/a	Continuing cal 50
ZZZZZZ	3Q7282.D	08/13/19 23:22	OP76314	(unrelated sample)
ZZZZZZ	3Q7283.D	08/13/19 23:38	OP76314	(unrelated sample)
ZZZZZZ	3Q7286.D	08/14/19 00:25	OP76314	(unrelated sample)
ZZZZZZ	3Q7287.D	08/14/19 00:41	OP76314	(unrelated sample)
ZZZZZZ	3Q7288.D	08/14/19 00:56	OP76314	(unrelated sample)
ZZZZZZ	3Q7290.D	08/14/19 01:27	OP76314	(unrelated sample)
S3Q147-CC147	3Q7291.D	08/14/19 01:43	n/a	Continuing cal 50
FA66631-2	3Q7293.D	08/14/19 02:14	OP76314	(used for QC only; not part of job FA66397)
OP76314-DUP	3Q7294.D	08/14/19 02:30	OP76314	Duplicate
ZZZZZZ	3Q7295.D	08/14/19 02:46	OP76314	(unrelated sample)
ZZZZZZ	3Q7297.D	08/14/19 03:17	OP76314	(unrelated sample)
ZZZZZZ	3Q7298.D	08/14/19 03:32	OP76314	(unrelated sample)
ZZZZZZ	3Q7299.D	08/14/19 03:48	OP76314	(unrelated sample)

Run Sequence Report

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Run ID: S3Q147	Method: EPA 537.1 REV 1.0	Instrument ID: GCMS3Q
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
ZZZZZZ	3Q7300.D	08/14/19 04:04	OP76314	(unrelated sample)
S3Q147-CC147	3Q7301.D	08/14/19 04:19	n/a	Continuing cal 20
OP76307-BS	3Q7303.D	08/14/19 04:50	OP76307	Blank Spike
OP76307-MB	3Q7304.D	08/14/19 05:06	OP76307	Method Blank
ZZZZZZ	3Q7305.D	08/14/19 05:22	OP76307	(unrelated sample)
ZZZZZZ	3Q7306.D	08/14/19 05:37	OP76307	(unrelated sample)
ZZZZZZ	3Q7308.D	08/14/19 06:09	OP76307	(unrelated sample)
ZZZZZZ	3Q7309.D	08/14/19 06:24	OP76307	(unrelated sample)
ZZZZZZ	3Q7311.D	08/14/19 06:55	OP76307	(unrelated sample)
S3Q147-CC147	3Q7313.D	08/14/19 07:27	n/a	Continuing cal 20
FA66869-1	3Q7315.D	08/14/19 07:59	OP76307	(used for QC only; not part of job FA66397)
OP76307-MS	3Q7316.D	08/14/19 08:14	OP76307	Matrix Spike
OP76307-MSD	3Q7317.D	08/14/19 08:30	OP76307	Matrix Spike Duplicate
ZZZZZZ	3Q7318.D	08/14/19 08:46	OP76307	(unrelated sample)
ZZZZZZ	3Q7319.D	08/14/19 09:01	OP76307	(unrelated sample)
ZZZZZZ	3Q7320.D	08/14/19 09:17	OP76307	(unrelated sample)
ZZZZZZ	3Q7321.D	08/14/19 09:32	OP76307	(unrelated sample)
ZZZZZZ	3Q7322.D	08/14/19 09:48	OP76307	(unrelated sample)
ZZZZZZ	3Q7323.D	08/14/19 10:04	OP76307	(unrelated sample)
S3Q147-CC147	3Q7325.D	08/14/19 10:35	n/a	Continuing cal 20
ZZZZZZ	3Q7327.D	08/14/19 11:06	OP76314	(unrelated sample)
ZZZZZZ	3Q7328.D	08/14/19 11:22	OP76314	(unrelated sample)
ZZZZZZ	3Q7329.D	08/14/19 11:37	OP76314	(unrelated sample)
S3Q147-ECC147	3Q7330.D	08/14/19 11:53	n/a	Ending cal 20

6.7.4

6

Run Sequence Report

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Run ID: SQ1412	Method: EPA 537.1 REV 1.0	Instrument ID: GCMSQ
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
SQ1412-IC1412	Q62289.D	08/13/19 08:39	n/a	Initial cal 0.5
SQ1412-IC1412	Q62290.D	08/13/19 08:54	n/a	Initial cal 1.0
SQ1412-IC1412	Q62291.D	08/13/19 09:10	n/a	Initial cal 2.0
SQ1412-IC1412	Q62292.D	08/13/19 09:25	n/a	Initial cal 5.0
SQ1412-IC1412	Q62293.D	08/13/19 09:40	n/a	Initial cal 10
SQ1412-ICC1412	Q62294.D	08/13/19 09:56	n/a	Initial cal 20
SQ1412-IC1412	Q62295.D	08/13/19 10:13	n/a	Initial cal 50
SQ1412-IC1412	Q62296.D	08/13/19 10:29	n/a	Initial cal 100
SQ1412-ICV1412	Q62298.D	08/13/19 11:00	n/a	Initial cal verification 20
SQ1412-ICV1412	Q62299.D	08/13/19 11:15	n/a	Initial cal verification 20
OP76285-BS2	Q62300.D	08/13/19 11:30	OP76285	Blank Spike
OP76285-BS	Q62301.D	08/13/19 11:46	OP76285	Blank Spike
OP76285-MB	Q62302.D	08/13/19 12:01	OP76285	Method Blank
FA66397-2	Q62303.D	08/13/19 12:17	OP76285	WI-CV-FCWTP-INF200-072519
FA66397-4	Q62304.D	08/13/19 12:32	OP76285	WI-CV-FCWTP-FB-205-072519
FA66397-8	Q62305.D	08/13/19 12:47	OP76285	WI-CV-FCWTP-INF001-072519
FA66397-9	Q62306.D	08/13/19 13:03	OP76285	WI-CV-FCWTP-INF001P-072519
FA66397-11	Q62307.D	08/13/19 13:18	OP76285	WI-CV-FCWTP-EF002-072519
ZZZZZZ	Q62308.D	08/13/19 13:34	OP76285	(unrelated sample)
SQ1412-CC1412	Q62309.D	08/13/19 13:49	n/a	Continuing cal 20
ZZZZZZ	Q62311.D	08/13/19 14:20	OP76285	(unrelated sample)
FA66603-2	Q62312.D	08/13/19 14:35	OP76285	(used for QC only; not part of job FA66397)
ZZZZZZ	Q62314.D	08/13/19 15:06	OP76285	(unrelated sample)
FA66609-2	Q62318.D	08/13/19 16:07	OP76285	(used for QC only; not part of job FA66397)
OP76285-MS	Q62319.D	08/13/19 16:23	OP76285	Matrix Spike
SQ1412-CC1412	Q62320.D	08/13/19 16:55	n/a	Continuing cal 50
OP76305-BS	Q62322.D	08/13/19 17:26	OP76305	Blank Spike
OP76305-MB	Q62323.D	08/13/19 17:42	OP76305	Method Blank
ZZZZZZ	Q62324.D	08/13/19 17:57	OP76305	(unrelated sample)
ZZZZZZ	Q62325.D	08/13/19 18:13	OP76305	(unrelated sample)
FA66864-5	Q62326.D	08/13/19 18:28	OP76305	(used for QC only; not part of job FA66397)
OP76305-MS	Q62327.D	08/13/19 18:43	OP76305	Matrix Spike
OP76305-MSD	Q62328.D	08/13/19 18:59	OP76305	Matrix Spike Duplicate
ZZZZZZ	Q62329.D	08/13/19 19:14	OP76305	(unrelated sample)
ZZZZZZ	Q62330.D	08/13/19 19:29	OP76305	(unrelated sample)
ZZZZZZ	Q62331.D	08/13/19 19:45	OP76305	(unrelated sample)
SQ1412-CC1412	Q62332.D	08/13/19 20:00	n/a	Continuing cal 20
ZZZZZZ	Q62334.D	08/13/19 20:31	OP76305	(unrelated sample)
ZZZZZZ	Q62336.D	08/13/19 21:02	OP76305	(unrelated sample)
ZZZZZZ	Q62338.D	08/13/19 21:32	OP76305	(unrelated sample)
ZZZZZZ	Q62340.D	08/13/19 22:03	OP76305	(unrelated sample)
ZZZZZZ	Q62342.D	08/13/19 22:34	OP76305	(unrelated sample)
SQ1412-CC1412	Q62344.D	08/13/19 23:05	n/a	Continuing cal 50
OP76304-BS	Q62346.D	08/13/19 23:35	OP76304	Blank Spike
OP76304-MB	Q62347.D	08/13/19 23:51	OP76304	Method Blank
ZZZZZZ	Q62348.D	08/14/19 00:06	OP76304	(unrelated sample)

Run Sequence Report

Job Number: FA66397
 Account: ITVAVAB APTIM
 Project: TCWTS; Coupeville, WA

Run ID: SQ1412	Method: EPA 537.1 REV 1.0	Instrument ID: GCMSQ
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
ZZZZZZ	Q62350.D	08/14/19 00:37	OP76304	(unrelated sample)
ZZZZZZ	Q62352.D	08/14/19 01:07	OP76304	(unrelated sample)
ZZZZZZ	Q62353.D	08/14/19 01:23	OP76304	(unrelated sample)
SQ1412-CC1412	Q62356.D	08/14/19 02:09	n/a	Continuing cal 20
FA66865-31	Q62358.D	08/14/19 02:40	OP76304	(used for QC only; not part of job FA66397)
OP76304-MS	Q62359.D	08/14/19 02:55	OP76304	Matrix Spike
OP76304-MSD	Q62360.D	08/14/19 03:10	OP76304	Matrix Spike Duplicate
ZZZZZZ	Q62361.D	08/14/19 03:26	OP76304	(unrelated sample)
ZZZZZZ	Q62363.D	08/14/19 03:57	OP76304	(unrelated sample)
ZZZZZZ	Q62364.D	08/14/19 04:12	OP76304	(unrelated sample)
ZZZZZZ	Q62365.D	08/14/19 04:27	OP76304	(unrelated sample)
ZZZZZZ	Q62367.D	08/14/19 04:58	OP76304	(unrelated sample)
SQ1412-CC1412	Q62368.D	08/14/19 05:13	n/a	Continuing cal 20
OP76303-MS	Q62371.D	08/14/19 06:00	OP76303	Matrix Spike
SQ1412-ECC1412	Q62372.D	08/14/19 06:15	n/a	Ending cal 50
SQ1412-IBLK	Q62373.D	08/14/19 06:30	n/a	Method Blank
SQ1412-CC1412	Q62374.D	08/14/19 06:46	n/a	Continuing cal 50
OP76332-BS	Q62375.D	08/14/19 07:01	OP76332	Blank Spike
OP76332-MB	Q62376.D	08/14/19 07:16	OP76332	Method Blank
ZZZZZZ	Q62377.D	08/14/19 07:32	OP76332	(unrelated sample)
ZZZZZZ	Q62378.D	08/14/19 07:49	OP76332	(unrelated sample)
SQ1412-ECC1412	Q62379.D	08/14/19 08:05	n/a	Ending cal 20

6.7.5

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