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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC5258

Sampling Date: 04/13/23



Report to:

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Total number of pages in report: 37



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.

Norm Farmer
Technical Director

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Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
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Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Summary of Hits	5
Section 4: Sample Results	6
4.1: FC5258-1: AF-RHMW225401-WGN01B-2304W2	7
4.2: FC5258-2: AF-RHMW12A-WGN01LF-2304W2	10
4.3: FC5258-3: AF-RHMW12A-WGFD01LF-2304W2	13
Section 5: Misc. Forms	16
5.1: Chain of Custody	17
5.2: QC Evaluation: DOD QSM5.x Limits	20
Section 6: MS Semi-volatiles - QC Data Summaries	21
6.1: Method Blank Summary	22
6.2: Blank Spike Summary	30
6.3: Matrix Spike Summary	34
6.4: Duplicate Summary	36

1

2

3

4

5

6



Sample Summary

AECOM, INC.

Job No: FC5258

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC5258-1	04/13/23	09:00 NH	04/14/23	AQ	Ground Water	AF-RHMW225401-WGN01B-2304W2
FC5258-2	04/13/23	12:30 RS	04/14/23	AQ	Ground Water	AF-RHMW12A-WGN01LF-2304W2
FC5258-3	04/13/23	12:30 RS	04/14/23	AQ	Ground Water	AF-RHMW12A-WGFD01LF-2304W2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC.

Job No: FC5258

Site: N6274223F0104 RH Fire Suppression System

Report Date: 4/21/2023 12:05:36 PM

On 04/14/2023, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 2.9 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC5258 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Semi-volatiles By Method EPA DRAFT 1633

Matrix: AQ

Batch ID: OP96450

Sample(s) FC5258-1MS, FC5258-2DUP, FC5258-1MS were used as the QC samples indicated.

Blank Spike Recovery(s) for 7:3 Fluorotelomer carboxylate are outside control limits.

FC5258-1 for 7:3 Fluorotelomer carboxylate: Associated BS and Low Level BS outside of control limits high, sample was ND.

FC5258-2 for 7:3 Fluorotelomer carboxylate: Associated BS and Low Level BS outside of control limits high, sample was ND.

FC5258-3 for 7:3 Fluorotelomer carboxylate: Associated BS and Low Level BS outside of control limits high, sample was ND.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Kim Benham, Client Services (*Signature on File*)

Summary of Hits

Job Number: FC5258
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/13/23



Lab Sample ID	Client Sample ID	Result/ Analyte	LOQ	LOD	Units	Method	
FC5258-1	AF-RHMW225401-WGN01B-2304W2						
		Perfluoropentanoic acid	1.6 J	8.8	1.8	ng/l	EPA DRAFT 1633
		Perfluorohexanoic acid	1.3 J	4.4	0.88	ng/l	EPA DRAFT 1633
		Perfluoroheptanoic acid	0.94 J	4.4	0.88	ng/l	EPA DRAFT 1633
		Perfluorooctanoic acid	1.1 J	4.4	0.88	ng/l	EPA DRAFT 1633
		Perfluorobutanesulfonic acid	0.89 J	4.4	0.88	ng/l	EPA DRAFT 1633
		Perfluorohexanesulfonic acid	1.4 J	4.4	1.8	ng/l	EPA DRAFT 1633
		Perfluorooctanesulfonic acid	0.98 J	4.4	1.8	ng/l	EPA DRAFT 1633
FC5258-2	AF-RHMW12A-WGN01LF-2304W2						
		Perfluorobutanoic acid	2.0 J	18	3.6	ng/l	EPA DRAFT 1633
		Perfluoropentanoic acid	4.7 J	9.1	1.8	ng/l	EPA DRAFT 1633
		Perfluorohexanoic acid	1.3 J	4.5	0.91	ng/l	EPA DRAFT 1633
FC5258-3	AF-RHMW12A-WGFD01LF-2304W2						
		Perfluoropentanoic acid	4.5 J	9.4	1.9	ng/l	EPA DRAFT 1633
		Perfluorohexanoic acid	1.3 J	4.7	0.94	ng/l	EPA DRAFT 1633

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2304W2		
Lab Sample ID:	FC5258-1	Date Sampled:	04/13/23
Matrix:	AQ - Ground Water	Date Received:	04/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13220.D	1	04/20/23 05:54	NG	04/18/23 10:00	OP96450	S5Q205
Run #2							

Run #	Initial Volume	Final Volume
Run #1	570 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	3.5 U	18	3.5	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.6	8.8	1.8	0.82	ng/l	J
307-24-4	Perfluorohexanoic acid	1.3	4.4	0.88	0.44	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.94	4.4	0.88	0.44	ng/l	J
335-67-1	Perfluorooctanoic acid	1.1	4.4	0.88	0.44	ng/l	J
375-95-1	Perfluorononanoic acid	1.8 U	4.4	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	4.4	1.8	0.53	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	4.4	1.8	0.53	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	4.4	1.8	0.74	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.88 U	4.4	0.88	0.44	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.89	4.4	0.88	0.44	ng/l	J
2706-91-4	Perfluoropentanesulfonic acid	3.5 U	4.4	3.5	0.98	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.4	4.4	1.8	0.61	ng/l	J
375-92-8	Perfluoroheptanesulfonic acid	0.88 U	4.4	0.88	0.44	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	0.98	4.4	1.8	0.47	ng/l	J
68259-12-1	Perfluorononanesulfonic acid	1.8 U	4.4	1.8	0.50	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	4.4	1.8	0.56	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.5 U	4.4	3.5	1.0	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.0 U	18	7.0	2.8	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.6	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.8 U	4.4	1.8	0.59	ng/l	
31506-32-8	MeFOSA	1.8 U	4.4	1.8	0.88	ng/l	
4151-50-2	EtFOSA	1.8 U	4.4	1.8	0.88	ng/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2304W2		Date Sampled:	04/13/23
Lab Sample ID:	FC5258-1	Date Received:	04/14/23	
Matrix:	AQ - Ground Water	Percent Solids:	n/a	
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
Project:	N6274223F0104 RH Fire Suppression System			

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROOCCTANE SULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	3.5 U	4.4	3.5	0.88	ng/l	
2991-50-6	EtFOSAA	3.5 U	4.4	3.5	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	8.8 U	44	8.8	3.8	ng/l	
1691-99-2	EtFOSE	18 U	44	18	6.5	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	3.5 U	18	3.5	0.88	ng/l	
919005-14-4	ADONA	3.5 U	18	3.5	1.6	ng/l	
377-73-1	PFMPA	1.8 U	8.8	1.8	0.88	ng/l	
863090-89-5	PFMBA	3.5 U	8.8	3.5	1.0	ng/l	
151772-58-6	NFDHA	3.5 U	8.8	3.5	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.5 U	18	3.5	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.5 U	18	3.5	1.5	ng/l	
113507-82-7	PFEESA	1.8 U	8.8	1.8	0.68	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	8.8 U	22	8.8	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	110	18	7.7	ng/l	
812-70-4	7:3 Fluorotelomer carboxylat ^a	18 U	110	18	6.9	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	111%		20-150%
	13C5-PFPeA	109%		20-150%
	13C5-PFHxA	108%		20-150%
	13C4-PFHpA	106%		20-150%
	13C8-PFOA	108%		20-150%
	13C9-PFNA	106%		20-150%
	13C6-PFDA	107%		20-150%
	13C7-PFUnDA	106%		20-150%
	13C2-PFDoDA	95%		20-150%
	13C2-PFTeDA	81%		20-150%
	13C3-PFBS	123%		20-150%
	13C3-PFHxS	107%		20-150%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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4

Report of Analysis

Client Sample ID: AF-RHMW225401-WGN01B-2304W2		Date Sampled: 04/13/23
Lab Sample ID: FC5258-1		Date Received: 04/14/23
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: EPA DRAFT 1633 EPA 1633 DRAFT		
Project: N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	99%		20-150%
	13C8-FOSA	104%		20-150%
	d3-MeFOSA	95%		20-150%
	d5-EtFOSA	90%		20-150%
	d3-MeFOSAA	106%		20-150%
	d5-EtFOSAA	118%		20-150%
	d7-MeFOSE	99%		20-150%
	d9-EtFOSE	87%		20-150%
	13C2-4:2FTS	132%		20-150%
	13C2-6:2FTS	109%		20-150%
	13C2-8:2FTS	105%		20-150%
	13C3-HFPO-DA	108%		20-150%

(a) Associated BS and Low Level BS outside of control limits high, sample was ND.

U = Not detected	LOD = Limit of Detection	J = Indicates an estimated value
LOQ = Limit of Quantitation	DL = Detection Limit	B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2304W2		
Lab Sample ID:	FC5258-2	Date Sampled:	04/13/23
Matrix:	AQ - Ground Water	Date Received:	04/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13222.D	1	04/20/23 06:22	NG	04/18/23 10:00	OP96450	S5Q205
Run #2							

Run #	Initial Volume	Final Volume
Run #1	550 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	2.0	18	3.6	1.7	ng/l	J
2706-90-3	Perfluoropentanoic acid	4.7	9.1	1.8	0.85	ng/l	J
307-24-4	Perfluorohexanoic acid	1.3	4.5	0.91	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
335-76-2	Perfluorodecanoic acid	0.91 U	4.5	0.91	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	4.5	1.8	0.55	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	4.5	1.8	0.76	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.91 U	4.5	0.91	0.45	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.91 U	4.5	0.91	0.45	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.6 U	4.5	3.6	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	4.5	1.8	0.64	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.91 U	4.5	0.91	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	4.5	1.8	0.49	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	4.5	1.8	0.52	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	4.5	1.8	0.58	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.6 U	4.5	3.6	1.0	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.3 U	18	7.3	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.7	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.8 U	4.5	1.8	0.61	ng/l	
31506-32-8	MeFOSA	1.8 U	4.5	1.8	0.91	ng/l	
4151-50-2	EtFOSA	1.8 U	4.5	1.8	0.91	ng/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2304W2		
Lab Sample ID:	FC5258-2	Date Sampled:	04/13/23
Matrix:	AQ - Ground Water	Date Received:	04/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROOCCTANE SULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.91	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	9.1 U	45	9.1	4.0	ng/l	
1691-99-2	EtFOSE	18 U	45	18	6.7	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	3.6 U	18	3.6	0.91	ng/l	
919005-14-4	ADONA	3.6 U	18	3.6	1.7	ng/l	
377-73-1	PFMPA	1.8 U	9.1	1.8	0.91	ng/l	
863090-89-5	PFMBA	3.6 U	9.1	3.6	1.0	ng/l	
151772-58-6	NFDHA	3.6 U	9.1	3.6	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.6 U	18	3.6	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.6 U	18	3.6	1.6	ng/l	
113507-82-7	PFEESA	1.8 U	9.1	1.8	0.71	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	9.1 U	23	9.1	4.1	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	110	18	7.9	ng/l	
812-70-4	7:3 Fluorotelomer carboxylat ^a	18 U	110	18	7.1	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	108%		20-150%
	13C5-PFPeA	111%		20-150%
	13C5-PFHxA	109%		20-150%
	13C4-PFHpA	109%		20-150%
	13C8-PFOA	107%		20-150%
	13C9-PFNA	103%		20-150%
	13C6-PFDA	95%		20-150%
	13C7-PFUnDA	93%		20-150%
	13C2-PFDoDA	83%		20-150%
	13C2-PFTeDA	75%		20-150%
	13C3-PFBS	113%		20-150%
	13C3-PFHxS	102%		20-150%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2304W2		
Lab Sample ID:	FC5258-2	Date Sampled:	04/13/23
Matrix:	AQ - Ground Water	Date Received:	04/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	96%		20-150%
	13C8-FOSA	100%		20-150%
	d3-MeFOSA	94%		20-150%
	d5-EtFOSA	94%		20-150%
	d3-MeFOSAA	104%		20-150%
	d5-EtFOSAA	117%		20-150%
	d7-MeFOSE	91%		20-150%
	d9-EtFOSE	88%		20-150%
	13C2-4:2FTS	117%		20-150%
	13C2-6:2FTS	115%		20-150%
	13C2-8:2FTS	93%		20-150%
	13C3-HFPO-DA	111%		20-150%

(a) Associated BS and Low Level BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGFD01LF-2304W2		
Lab Sample ID:	FC5258-3	Date Sampled:	04/13/23
Matrix:	AQ - Ground Water	Date Received:	04/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Q13224.D	1	04/20/23 06:51	NG	04/18/23 10:00	OP96450	S5Q205
Run #2							

Run #	Initial Volume	Final Volume
Run #1	530 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	3.8 U	19	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	4.5	9.4	1.9	0.89	ng/l	J
307-24-4	Perfluorohexanoic acid	1.3	4.7	0.94	0.47	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
335-67-1	Perfluorooctanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	4.7	1.9	0.58	ng/l	
335-76-2	Perfluorodecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.7	1.9	0.79	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.7	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	4.7	1.9	0.66	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.7	1.9	0.51	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.7	1.9	0.54	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.7	1.9	0.60	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.7	3.8	1.1	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.3	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.9	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	4.7	1.9	0.63	ng/l	
31506-32-8	MeFOSA	1.9 U	4.7	1.9	0.94	ng/l	
4151-50-2	EtFOSA	1.9 U	4.7	1.9	0.94	ng/l	

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit 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:	AF-RHMW12A-WGFD01LF-2304W2		
Lab Sample ID:	FC5258-3	Date Sampled:	04/13/23
Matrix:	AQ - Ground Water	Date Received:	04/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
---------	----------	--------	-----	-----	----	-------	---

PERFLUOROOCCTANE SULFONAMIDOACETIC ACIDS

2355-31-9	MeFOSAA	3.8 U	4.7	3.8	0.94	ng/l	
2991-50-6	EtFOSAA	3.8 U	4.7	3.8	1.3	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	9.4 U	47	9.4	4.1	ng/l	
1691-99-2	EtFOSE	19 U	47	19	7.0	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	3.8 U	19	3.8	0.94	ng/l	
919005-14-4	ADONA	3.8 U	19	3.8	1.8	ng/l	
377-73-1	PFMPA	1.9 U	9.4	1.9	0.94	ng/l	
863090-89-5	PFMBA	3.8 U	9.4	3.8	1.1	ng/l	
151772-58-6	NFDHA	3.8 U	9.4	3.8	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	19	3.8	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	19	3.8	1.7	ng/l	
113507-82-7	PFEESA	1.9 U	9.4	1.9	0.74	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	9.4 U	24	9.4	4.3	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	120	19	8.2	ng/l	
812-70-4	7:3 Fluorotelomer carboxylat ^a	19 U	120	19	7.4	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
---------	------------------------	--------	--------	--------

	13C4-PFBA	110%		20-150%
	13C5-PFPeA	119%		20-150%
	13C5-PFHxA	114%		20-150%
	13C4-PFHpA	111%		20-150%
	13C8-PFOA	109%		20-150%
	13C9-PFNA	107%		20-150%
	13C6-PFDA	102%		20-150%
	13C7-PFUnDA	102%		20-150%
	13C2-PFDoDA	93%		20-150%
	13C2-PFTeDA	82%		20-150%
	13C3-PFBS	116%		20-150%
	13C3-PFHxS	118%		20-150%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGFD01LF-2304W2	
Lab Sample ID:	FC5258-3	Date Sampled: 04/13/23
Matrix:	AQ - Ground Water	Date Received: 04/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	101%		20-150%
	13C8-FOSA	105%		20-150%
	d3-MeFOSA	105%		20-150%
	d5-EtFOSA	107%		20-150%
	d3-MeFOSAA	112%		20-150%
	d5-EtFOSAA	129%		20-150%
	d7-MeFOSE	100%		20-150%
	d9-EtFOSE	99%		20-150%
	13C2-4:2FTS	108%		20-150%
	13C2-6:2FTS	105%		20-150%
	13C2-8:2FTS	115%		20-150%
	13C3-HFPO-DA	116%		20-150%

(a) Associated BS and Low Level BS outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range 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.x Limits



SGS North America Inc - Orlando
Chain of Custody

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

FC5258
SGS - ORLANDO JOB #:

COC #: 2304W2AFSG07

PAGE 1 OF 1

Client / Reporting Information			Project Information			SGS - ORLANDO Quote #		SKIFF #							
Company Name: AECOM			Project Name: N6274223F0104 RH Fire Suppression System												
Address: 1001 Bishop St. ste 1600			Street												
City: Honolulu State: HI Zip: 96813			City: Honolulu State: Hawaii												
Project Contact: Katie Abbott Email: katie.abbott@aecom.com			Project # 60697810												
Project Manager: Watson Tanji Email: watson.tanji@aecom.com			Fax #												
Phone #: 303-796-4624 / 808-954-4512			Client Purchase Order #												
Sampler(s) Name(s) (Printed)															
Sampler 1: <i>WJ</i>			Sampler 2:												
SGS Orlando Sample #	COLLECTION			CONTAINER INFORMATION											LAB USE ONLY
	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	ICI	NACH	PHOS	RESOL	NACH-ZINC	DI WATER	
1	AF-RHMMW225401-WGN01B-2304W2	4/13/23	0900	<i>WJ</i>	GW	3	X								
INITIAL ASSESSMENT										<i>[Signature]</i>		<i>WJ</i>			
LABEL VERIFICATION										<i>[Signature]</i>		<i>WJ</i>		<i>4/13/23</i>	
Turnaround Time (Business days)			Data Deliverable Information			Comments / Remarks									
10 Day (Business) Approved By: / Date: _____ 7 Day _____ 5 Day <input checked="" type="checkbox"/> _____ 3 Day RUSH _____ 2 Day RUSH _____ 1 Day RUSH _____ Other _____			<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4) <input checked="" type="checkbox"/> EDD'S			EDMS upload database: JBPHE EDMS Coverage: AFFF Assessment Sampling GW United AWB 016-13645903									
Rush T/A Data Available VIA Email or Lablink															
Sample Custody must be documented below each time samples change possession, including courier delivery.															
Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation				
1 <i>WJ</i>	4/13/23	2 <i>[Signature]</i> AECOM	3 <i>[Signature]</i> AECOM	4/13/23	4 <i>[Signature]</i> AECOM	5 <i>[Signature]</i> AECOM	6/13/23	6 <i>[Signature]</i> AECOM	7 <i>[Signature]</i> AECOM	8/13/23	8 <i>[Signature]</i> AECOM				
5		6	7		8										
Lab Use Only : Cooler Temperature (s) Celsius (corrected): <i>9.0/6</i>										http://www.sgs.com/en/terms-and-conditions					

PFAS_COCs_ALL.xls Rev 031318

FC5258: Chain of Custody

Page 1 of 3





SGS North America Inc - Orlando Chain of Custody

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

FC5258

COC #: 2304W2AFSG05
PAGE 1 OF 1

Client / Reporting Information			Project Information					SGS - ORLANDO Quote #			SKIFF #																																																																										
Company Name: AECOM			Project Name: N6274223F0104 RH Fire Suppression System																																																																																		
Address: 1001 Bishop St. Ste 1600			Street																																																																																		
City: Honolulu		State: HI		Zip: 96813		City: Honolulu		State: Hawaii																																																																													
Project Contact: Katie Abbott Email: katie.abbott@aecom.com Project Manager: Watson Tanji Email: watson.tanji@aecom.com			Project # 60697810																																																																																		
Phone #: 303-796-4624 / 808-954-4512			Fax #																																																																																		
Sampler(s) Name(s) (Printed)			Client Purchase Order #																																																																																		
Sampler 1: <i>Reynolds</i>																																																																																					
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NO3+-NH4+	DI WATER	MECH	PFAS EPA Draft 1633																																																																					
2	AF-RHMW12A-WGN01LF-2304W2	4/13/23	12:50	CP	GW	3			X							X																																																																					
1	AF-RHMW12A-WGFD01LF-2304W2	4/13/23	12:30	CP	GW	3			X							X																																																																					
<table border="1"> <tr> <th colspan="2">Turnaround Time (Business days)</th> <th colspan="4">Data Deliverable Information</th> <th colspan="2">Comments / Remarks</th> </tr> <tr> <td>10 Day (Business)</td> <td>Approved By: / Date:</td> <td><input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY)</td> <td colspan="3"></td> <td colspan="2">EDMS upload database: JBPHE</td> </tr> <tr> <td>7 Day</td> <td></td> <td><input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC)</td> <td colspan="3"></td> <td colspan="2">EDMS Coverage: AFFF Assessment Sampling GW</td> </tr> <tr> <td>5 Day</td> <td></td> <td><input type="checkbox"/> REDT1 (EPA LEVEL 3)</td> <td colspan="3"></td> <td colspan="2">United AWB 016-13645903</td> </tr> <tr> <td>3 Day RUSH</td> <td></td> <td><input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4)</td> <td colspan="3"></td> <td colspan="2"></td> </tr> <tr> <td>2 Day RUSH</td> <td></td> <td><input checked="" type="checkbox"/> EDD'S</td> <td colspan="3"></td> <td colspan="2"></td> </tr> <tr> <td>1 Day RUSH</td> <td></td> <td colspan="5"></td> </tr> <tr> <td>Other</td> <td></td> <td colspan="5"></td> </tr> <tr> <td colspan="2">Rush T/A Data Available VIA Email or Lablink</td> <td colspan="6">Sample Custody must be documented below each time samples change possession, including courier delivery.</td> </tr> </table>																Turnaround Time (Business days)		Data Deliverable Information				Comments / Remarks		10 Day (Business)	Approved By: / Date:	<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY)				EDMS upload database: JBPHE		7 Day		<input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC)				EDMS Coverage: AFFF Assessment Sampling GW		5 Day		<input type="checkbox"/> REDT1 (EPA LEVEL 3)				United AWB 016-13645903		3 Day RUSH		<input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4)						2 Day RUSH		<input checked="" type="checkbox"/> EDD'S						1 Day RUSH							Other							Rush T/A Data Available VIA Email or Lablink		Sample Custody must be documented below each time samples change possession, including courier delivery.					
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1 Reynolds/AECON		4/13/23 15:46	2 Watson Tanji/AECON		3 Watson Tanji/AECON		4/13/23 15:00	4 Watson Tanji/AECON																																																																													
5			6		7			8																																																																													
Lab Use Only : Cooler Temperature (s) Celsius (corrected):										http://www.sgs.com/en/terms-and-conditions																																																																											



5.1
5

SGS Sample Receipt Summary

Job Number: FC5258

Client: AECOM

Project: N6274223F0104 RH Fire Suppression System

Date / Time Received: 4/14/2023 3:30:00 PM

Delivery Method: United Cargo/Airspace

Airbill #s: United Cargo AWB #: 016-13645903

Therm ID: IR 1;

Therm CF: -0.1;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.9);

Cooler Information

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

Trip Blank Information

Y or N N/A

- 1. Trip Blank present / cooler
 - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

Sample Information

Y or N N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____

Number of 5035 Field Kits: _____

Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230320

pH 10-12 25BDH07

Other: (Specify) pH 1.0 - 12.0 222221

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: NATHANS

Date: 4/14/2023 3:30:00 PM

Reviewer: CD

Date: 4/17/2023

FC5258: Chain of Custody

Page 3 of 3

5.1
5

QC Evaluation: DOD QSM5.x Limits

Job Number: FC5258
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/13/23

QC Sample ID	CAS#	Analyte	Sample Result Type	Result Type	Units	Limits
--------------	------	---------	--------------------	-------------	-------	--------

No DOD QSM5.x Limits found for methods in this job.

* Sample used for QC is not from job FC5258

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

Instrument Blank

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q205-IBLK	5Q13182.D	1	04/19/23	NG	n/a	n/a	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Instrument Blank

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q205-IBLK	5Q13182.D	1	04/19/23	NG	n/a	n/a	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	0.0281	0.13	0.0079	ug/l	J

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	102% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	99% 20-150%
	13C8-PFOA	99% 20-150%
	13C9-PFNA	104% 20-150%
	13C6-PFDA	102% 20-150%
	13C7-PFUnDA	102% 20-150%
	13C2-PFDoDA	101% 20-150%
	13C2-PFTeDA	96% 20-150%
	13C3-PFBS	100% 20-150%
	13C3-PFHxS	97% 20-150%
	13C8-PFOS	106% 20-150%
	13C8-FOSA	103% 20-150%
	d3-MeFOSA	97% 20-150%
	d5-EtFOSA	104% 20-150%
	d3-MeFOSAA	103% 20-150%
	d5-EtFOSAA	118% 20-150%
	d7-MeFOSE	102% 20-150%
	d9-EtFOSE	99% 20-150%
	13C2-4:2FTS	105% 20-150%
	13C2-6:2FTS	110% 20-150%
	13C2-8:2FTS	102% 20-150%
	13C3-HFPO-DA	100% 20-150%

6.1.1
6

Continuing Calibration Blank

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q205-ICCB	5Q13216.D	1	04/20/23	NG	n/a	n/a	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q205-ICCB	5Q13216.D	1	04/20/23	NG	n/a	n/a	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	103% 20-150%
	13C5-PFHxA	103% 20-150%
	13C4-PFHpA	103% 20-150%
	13C8-PFOA	99% 20-150%
	13C9-PFNA	97% 20-150%
	13C6-PFDA	100% 20-150%
	13C7-PFUnDA	100% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	93% 20-150%
	13C3-PFBS	98% 20-150%
	13C3-PFHxS	100% 20-150%
	13C8-PFOS	102% 20-150%
	13C8-FOSA	102% 20-150%
	d3-MeFOSA	101% 20-150%
	d5-EtFOSA	105% 20-150%
	d3-MeFOSAA	110% 20-150%
	d5-EtFOSAA	131% 20-150%
	d7-MeFOSE	100% 20-150%
	d9-EtFOSE	100% 20-150%
	13C2-4:2FTS	108% 20-150%
	13C2-6:2FTS	108% 20-150%
	13C2-8:2FTS	98% 20-150%
	13C3-HFPO-DA	105% 20-150%

Continuing Calibration Blank

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q205-ICCB	5Q13226.D	1	04/20/23	NG	n/a	n/a	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S5Q205-ICCB	5Q13226.D	1	04/20/23	NG	n/a	n/a	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	100% 20-150%
	13C5-PFPeA	101% 20-150%
	13C5-PFHxA	99% 20-150%
	13C4-PFHpA	100% 20-150%
	13C8-PFOA	99% 20-150%
	13C9-PFNA	100% 20-150%
	13C6-PFDA	104% 20-150%
	13C7-PFUnDA	103% 20-150%
	13C2-PFDoDA	98% 20-150%
	13C2-PFTeDA	93% 20-150%
	13C3-PFBS	96% 20-150%
	13C3-PFHxS	100% 20-150%
	13C8-PFOS	102% 20-150%
	13C8-FOSA	102% 20-150%
	d3-MeFOSAA	112% 20-150%
	d5-EtFOSAA	129% 20-150%
	13C2-4:2FTS	110% 20-150%
	13C2-6:2FTS	115% 20-150%
	13C2-8:2FTS	108% 20-150%

6.1.3

6

Method Blank Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-MB	5Q13219.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

6.1.4
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Method Blank Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-MB	5Q13219.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.010	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.025	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.13	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.13	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	121% 20-150%
	13C5-PFPeA	122% 20-150%
	13C5-PFHxA	121% 20-150%
	13C4-PFHpA	121% 20-150%
	13C8-PFOA	121% 20-150%
	13C9-PFNA	117% 20-150%
	13C6-PFDA	119% 20-150%
	13C7-PFUnDA	120% 20-150%
	13C2-PFDoDA	107% 20-150%
	13C2-PFTeDA	90% 20-150%
	13C3-PFBS	123% 20-150%
	13C3-PFHxS	117% 20-150%
	13C8-PFOS	118% 20-150%
	13C8-FOSA	111% 20-150%
	d3-MeFOSA	104% 20-150%
	d5-EtFOSA	104% 20-150%
	d3-MeFOSAA	123% 20-150%
	d5-EtFOSAA	111% 20-150%
	d7-MeFOSE	106% 20-150%
	d9-EtFOSE	104% 20-150%
	13C2-4:2FTS	146% 20-150%
	13C2-6:2FTS	129% 20-150%
	13C2-8:2FTS	120% 20-150%
	13C3-HFPO-DA	122% 20-150%

6.1.4

6

Blank Spike Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-LLBS	5Q13218.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0271	90	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0140	93	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0072	96	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0067	89	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0067	89	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0090	120	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0068	91	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0068	91	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0070	93	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0064	85	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0076	101	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0067	101	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0064	91	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0064	93	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0073	102	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0069	99	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0070	97	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0064	88	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0055	76	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0262	93	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0286	100	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0275	95	40-150
754-91-6	PFOSA	0.0075	0.0074	99	40-150
31506-32-8	MeFOSA	0.015	0.0168	112	40-150
4151-50-2	EtFOSA	0.015	0.0159	106	40-150
2355-31-9	MeFOSAA	0.0075	0.0065	87	40-150
2991-50-6	EtFOSAA	0.0075	0.0066	88	40-150
24448-09-7	MeFOSE	0.0375	0.0391	104	40-150
1691-99-2	EtFOSE	0.0375	0.0390	104	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0168	112	40-150
919005-14-4	ADONA	0.0142	0.0158	111	40-150
377-73-1	PFMPA	0.015	0.0188	125	40-150
863090-89-5	PFMBA	0.015	0.0165	110	40-150
151772-58-6	NFDHA	0.015	0.0183	122	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.014	0.0157	112	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0142	0.0133	94	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-LLBS	5Q13218.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0150	112	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0383	102	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.204	109	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.333	178*	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	117%	20-150%
	13C5-PFPeA	116%	20-150%
	13C5-PFHxA	114%	20-150%
	13C4-PFHpA	112%	20-150%
	13C8-PFOA	117%	20-150%
	13C9-PFNA	117%	20-150%
	13C6-PFDA	120%	20-150%
	13C7-PFUnDA	117%	20-150%
	13C2-PFDoDA	104%	20-150%
	13C2-PFTeDA	85%	20-150%
	13C3-PFBS	117%	20-150%
	13C3-PFHxS	113%	20-150%
	13C8-PFOS	113%	20-150%
	13C8-FOSA	113%	20-150%
	d3-MeFOSA	105%	20-150%
	d5-EtFOSA	103%	20-150%
	d3-MeFOSAA	124%	20-150%
	d5-EtFOSAA	142%	20-150%
	d7-MeFOSE	98%	20-150%
	d9-EtFOSE	96%	20-150%
	13C2-4:2FTS	142%	20-150%
	13C2-6:2FTS	124%	20-150%
	13C2-8:2FTS	121%	20-150%
	13C3-HFPO-DA	116%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-BS	5Q13217.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0969	97	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0479	96	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0235	94	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0250	100	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0242	97	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0248	99	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0240	96	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0249	100	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0247	99	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0243	97	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0236	94	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0221	100	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0236	100	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0219	96	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0244	102	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0232	100	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0270	112	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0244	101	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0232	96	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0991	106	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0858	90	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0954	99	40-150
754-91-6	PFOSA	0.025	0.0246	98	40-150
31506-32-8	MeFOSA	0.05	0.0570	114	40-150
4151-50-2	EtFOSA	0.05	0.0564	113	40-150
2355-31-9	MeFOSAA	0.025	0.0243	97	40-150
2991-50-6	EtFOSAA	0.025	0.0243	97	40-150
24448-09-7	MeFOSE	0.125	0.136	109	40-150
1691-99-2	EtFOSE	0.125	0.140	112	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0579	116	40-150
919005-14-4	ADONA	0.0473	0.0548	116	40-150
377-73-1	PFMPA	0.05	0.0479	96	40-150
863090-89-5	PFMBA	0.05	0.0571	114	40-150
151772-58-6	NFDHA	0.05	0.0607	121	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0545	117	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0535	113	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-BS	5Q13217.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0520	117	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.123	98	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.710	114	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.953	152*	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	36%	20-150%
	13C5-PFPeA	117%	20-150%
	13C5-PFHxA	115%	20-150%
	13C4-PFHpA	112%	20-150%
	13C8-PFOA	111%	20-150%
	13C9-PFNA	114%	20-150%
	13C6-PFDA	109%	20-150%
	13C7-PFUnDA	107%	20-150%
	13C2-PFDoDA	106%	20-150%
	13C2-PFTeDA	94%	20-150%
	13C3-PFBS	118%	20-150%
	13C3-PFHxS	111%	20-150%
	13C8-PFOS	106%	20-150%
	13C8-FOSA	110%	20-150%
	d3-MeFOSA	112%	20-150%
	d5-EtFOSA	107%	20-150%
	d3-MeFOSAA	122%	20-150%
	d5-EtFOSAA	130%	20-150%
	d7-MeFOSE	105%	20-150%
	d9-EtFOSE	105%	20-150%
	13C2-4:2FTS	123%	20-150%
	13C2-6:2FTS	127%	20-150%
	13C2-8:2FTS	108%	20-150%
	13C3-HFPO-DA	116%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-MS	5Q13221.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205
FC5258-1	5Q13220.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	FC5258-1 ug/l	Spike Q	MS ug/l	MS %	Limits	
375-22-4	Perfluorobutanoic acid	0.018 U		0.0943	0.0873	93	40-150
2706-90-3	Perfluoropentanoic acid	0.0016 J		0.0472	0.0455	93	40-150
307-24-4	Perfluorohexanoic acid	0.0013 J		0.0236	0.0234	94	40-150
375-85-9	Perfluoroheptanoic acid	0.00094 J		0.0236	0.0231	94	40-150
335-67-1	Perfluorooctanoic acid	0.0011 J		0.0236	0.0229	92	40-150
375-95-1	Perfluorononanoic acid	0.0044 U		0.0236	0.0228	97	40-150
335-76-2	Perfluorodecanoic acid	0.0044 U		0.0236	0.0224	95	40-150
2058-94-8	Perfluoroundecanoic acid	0.0044 U		0.0236	0.0231	98	40-150
307-55-1	Perfluorododecanoic acid	0.0044 U		0.0236	0.0226	96	40-150
72629-94-8	Perfluorotridecanoic acid	0.0044 U		0.0236	0.0215	91	40-150
376-06-7	Perfluorotetradecanoic acid	0.0044 U		0.0236	0.0225	95	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00089 J		0.0209	0.0199	91	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0044 U		0.0222	0.0202	91	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0014 J		0.0216	0.0223	97	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0044 U		0.0225	0.0226	101	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00098 J		0.0219	0.0228	100	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0044 U		0.0227	0.0230	101	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0044 U		0.0228	0.0217	95	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0044 U		0.0229	0.0201	88	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.018 U		0.0884	0.0831	94	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018 U		0.0896	0.0930	104	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U		0.0906	0.0890	98	40-150
754-91-6	PFOSA	0.0044 U		0.0236	0.0219	93	40-150
31506-32-8	MeFOSA	0.0044 U		0.0472	0.0533	113	40-150
4151-50-2	EtFOSA	0.0044 U		0.0472	0.0524	111	40-150
2355-31-9	MeFOSAA	0.0044 U		0.0236	0.0218	92	40-150
2991-50-6	EtFOSAA	0.0044 U		0.0236	0.0224	95	40-150
24448-09-7	MeFOSE	0.044 U		0.118	0.126	107	40-150
1691-99-2	EtFOSE	0.044 U		0.118	0.128	109	40-150
13252-13-6	HFPO-DA (GenX)	0.018 U		0.0472	0.0538	114	40-150
919005-14-4	ADONA	0.018 U		0.0446	0.0514	115	40-150
377-73-1	PFMPA	0.0088 U		0.0472	0.0572	121	40-150
863090-89-5	PFMBA	0.0088 U		0.0472	0.0535	113	40-150
151772-58-6	NFDHA	0.0088 U		0.0472	0.0518	110	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.018 U		0.0441	0.0500	113	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.018 U		0.0446	0.0466	105	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-MS	5Q13221.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205
FC5258-1	5Q13220.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	FC5258-1 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0088 U	0.042	0.0468	111	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.022 U	0.118	0.125	106	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.11 U	0.59	0.673	114	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.11 U	0.59	0.667	113	40-150

CAS No.	ID Standard Recoveries	MS	FC5258-1	Limits
	13C4-PFBA	114%	111%	20-150%
	13C5-PFPeA	116%	109%	20-150%
	13C5-PFHxA	113%	108%	20-150%
	13C4-PFHpA	112%	106%	20-150%
	13C8-PFOA	114%	108%	20-150%
	13C9-PFNA	112%	106%	20-150%
	13C6-PFDA	109%	107%	20-150%
	13C7-PFUnDA	116%	106%	20-150%
	13C2-PFDoDA	109%	95%	20-150%
	13C2-PFTeDA	92%	81%	20-150%
	13C3-PFBS	134%	123%	20-150%
	13C3-PFHxS	113%	107%	20-150%
	13C8-PFOS	102%	99%	20-150%
	13C8-FOSA	108%	104%	20-150%
	d3-MeFOSA	98%	95%	20-150%
	d5-EtFOSA	96%	90%	20-150%
	d3-MeFOSAA	132%	106%	20-150%
	d5-EtFOSAA	139%	118%	20-150%
	d7-MeFOSE	107%	99%	20-150%
	d9-EtFOSE	97%	87%	20-150%
	13C2-4:2FTS	155%* a	132%	20-150%
	13C2-6:2FTS	126%	109%	20-150%
	13C2-8:2FTS	122%	105%	20-150%
	13C3-HFPO-DA	111%	108%	20-150%

(a) Outside control limits.

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-DUP	5Q13223.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205
FC5258-2	5Q13222.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	FC5258-2 ug/l	DUP Q	ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.0020	J	0.0020	J	0	30
2706-90-3	Perfluoropentanoic acid	0.0047	J	0.0044	J	7	30
307-24-4	Perfluorohexanoic acid	0.0013	J	0.0012	J	8	30
375-85-9	Perfluoroheptanoic acid	0.0045	U	ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0045	U	ND		nc	30
375-95-1	Perfluorononanoic acid	0.0045	U	ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0045	U	ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0045	U	ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0045	U	ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0045	U	ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0045	U	ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0045	U	ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0045	U	ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0045	U	ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0045	U	ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0045	U	ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0045	U	ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0045	U	ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U	ND		nc	30
757124-72-44:2	Fluorotelomer sulfonate	0.018	U	ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U	ND		nc	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	ND		nc	30
754-91-6	PFOSA	0.0045	U	ND		nc	30
31506-32-8	MeFOSA	0.0045	U	ND		nc	30
4151-50-2	EtFOSA	0.0045	U	ND		nc	30
2355-31-9	MeFOSAA	0.0045	U	ND		nc	30
2991-50-6	EtFOSAA	0.0045	U	ND		nc	30
24448-09-7	MeFOSE	0.045	U	ND		nc	30
1691-99-2	EtFOSE	0.045	U	ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.018	U	ND		nc	30
919005-14-4	ADONA	0.018	U	ND		nc	30
377-73-1	PFMPA	0.0091	U	ND		nc	30
863090-89-5	PFMBA	0.0091	U	ND		nc	30
151772-58-6	NFDHA	0.0091	U	ND		nc	30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.018	U	ND		nc	30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.018	U	ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5258
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96450-DUP	5Q13223.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205
FC5258-2	5Q13222.D	1	04/20/23	NG	04/18/23	OP96450	S5Q205

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5258-1, FC5258-2, FC5258-3

CAS No.	Compound	FC5258-2 ug/l	DUP Q	ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0091 U	ND			nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.023 U	ND			nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.11 U	ND			nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.11 U	ND			nc	30

CAS No.	ID Standard Recoveries	DUP	FC5258-2	Limits
	13C4-PFBA	117%	108%	20-150%
	13C5-PFPeA	122%	111%	20-150%
	13C5-PFHxA	116%	109%	20-150%
	13C4-PFHpA	115%	109%	20-150%
	13C8-PFOA	114%	107%	20-150%
	13C9-PFNA	113%	103%	20-150%
	13C6-PFDA	104%	95%	20-150%
	13C7-PFUnDA	99%	93%	20-150%
	13C2-PFDoDA	89%	83%	20-150%
	13C2-PFTeDA	77%	75%	20-150%
	13C3-PFBS	119%	113%	20-150%
	13C3-PFHxS	112%	102%	20-150%
	13C8-PFOS	104%	96%	20-150%
	13C8-FOSA	110%	100%	20-150%
	d3-MeFOSA	105%	94%	20-150%
	d5-EtFOSA	102%	94%	20-150%
	d3-MeFOSAA	111%	104%	20-150%
	d5-EtFOSAA	120%	117%	20-150%
	d7-MeFOSE	96%	91%	20-150%
	d9-EtFOSE	92%	88%	20-150%
	13C2-4:2FTS	131%	117%	20-150%
	13C2-6:2FTS	113%	115%	20-150%
	13C2-8:2FTS	105%	93%	20-150%
	13C3-HFPO-DA	120%	111%	20-150%

* = Outside of Control Limits.