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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC10192

Sampling Date: 10/03/23



Report to:

AECOM, Inc
7595 Technology Way
Denver, CO 80237
katie.abbott@aecom.com; mark.kromis@aecom.com;
watson.tanji@aecom.com; kristin.rutherford@aecom.com;
ATTN: Katie Abbott

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 unless noted in the narrative, comments or footnotes.

Norm Farmer
Technical Director

Client Service contact: Elvin Kumar 407-425-6700

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),

AL, AK, AR, CT, IA, KY, MA, MI, MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

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Test results relate only to samples analyzed.

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Sample Summary

AECOM, INC.

Job No: FC10192

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC10192-1	10/03/23	10:10 AA	10/05/23	AQ	Ground Water	AF-HDMW225303-WGN01LF-2310
FC10192-2	10/03/23	12:40 AA	10/05/23	AQ	Ground Water	AF-RHMW12A-WGN01LF-2310
FC10192-3	10/03/23	12:40 AA	10/05/23	AQ	Ground Water	AF-RHMW12A-WGFD01LF-2310

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC.

Job No: FC10192

Site: N6274223F0104 RH Fire Suppression System

Report Date: 10/11/2023 10:44:41 AM

On 10/05/2023, 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 4.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC10192 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: OP99404

Sample(s) FC10192-1MS, FC10192-2DUP were used as the QC samples indicated.

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: FC10192
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 10/03/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FC10192-1 AF-HDMW225303-WGN01LF-2310

No hits reported in this sample.

FC10192-2 AF-RHMW12A-WGN01LF-2310

No hits reported in this sample.

FC10192-3 AF-RHMW12A-WGFD01LF-2310

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2310		
Lab Sample ID:	FC10192-1	Date Sampled:	10/03/23
Matrix:	AQ - Ground Water	Date Received:	10/05/23
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	6Q25956.D	1	10/08/23 18:52	MV	10/07/23 08:10	OP99404	S6Q367
Run #2							

Run #	Initial Volume	Final Volume
Run #1	520 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	15	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	7.7	1.9	0.90	ng/l	
307-24-4	Perfluorohexanoic acid	1.9 U	3.8	1.9	0.48	ng/l	
375-85-9	Perfluoroheptanoic acid	1.9 U	3.8	1.9	0.48	ng/l	
335-67-1	Perfluorooctanoic acid	0.96 U	3.8	0.96	0.48	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	3.8	1.9	0.59	ng/l	
335-76-2	Perfluorodecanoic acid	1.9 U	3.8	1.9	0.48	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	3.8	1.9	0.58	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	3.8	1.9	0.58	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	3.8	1.9	0.81	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.9 U	3.8	1.9	0.48	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.9 U	3.8	1.9	0.48	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.8	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	3.8	1.9	0.67	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.9 U	3.8	1.9	0.48	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	3.8	1.9	0.52	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	3.8	1.9	0.55	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	3.8	1.9	0.62	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.8	3.8	1.1	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.7 U	19	7.7	3.1	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.7 U	19	7.7	3.3	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.7 U	19	7.7	4.0	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	3.8	1.9	0.64	ng/l	
31506-32-8	MeFOSA	3.8 U	7.7	3.8	0.96	ng/l	
4151-50-2	EtFOSA	3.8 U	7.7	3.8	0.96	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-HDMW225303-WGN01LF-2310		
Lab Sample ID:	FC10192-1	Date Sampled:	10/03/23
Matrix:	AQ - Ground Water	Date Received:	10/05/23
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	3.8 U	4.8	3.8	0.96	ng/l	
2991-50-6	EtFOSAA	3.8 U	4.8	3.8	1.3	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	19 U	38	19	4.2	ng/l	
1691-99-2	EtFOSE	19 U	38	19	7.1	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	1.9 U	3.8	1.9	0.96	ng/l	
919005-14-4	ADONA	3.8 U	7.7	3.8	1.8	ng/l	
377-73-1	PFMPA	1.9 U	7.7	1.9	0.96	ng/l	
863090-89-5	PFMBA	3.8 U	7.7	3.8	1.1	ng/l	
151772-58-6	NFDHA	3.8 U	7.7	3.8	1.2	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	7.7	3.8	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	7.7	3.8	1.7	ng/l	
113507-82-7	PFEESA	1.9 U	7.7	1.9	0.75	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	9.6 U	19	9.6	4.3	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	96	19	8.4	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	96	19	7.5	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	103%		20-150%
	13C5-PFPeA	103%		20-150%
	13C5-PFHxA	100%		20-150%
	13C4-PFHpA	100%		20-150%
	13C8-PFOA	105%		20-150%
	13C9-PFNA	95%		20-150%
	13C6-PFDA	105%		20-150%
	13C7-PFUnDA	106%		20-150%
	13C2-PFDoDA	89%		20-150%
	13C2-PFTeDA	84%		20-150%
	13C3-PFBS	103%		20-150%
	13C3-PFHxS	104%		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-HDMW225303-WGN01LF-2310		
Lab Sample ID:	FC10192-1	Date Sampled:	10/03/23
Matrix:	AQ - Ground Water	Date Received:	10/05/23
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	95%		20-150%
	13C8-FOSA	74%		20-150%
	d3-MeFOSA	81%		20-150%
	d5-EtFOSA	80%		20-150%
	d3-MeFOSAA	99%		20-150%
	d5-EtFOSAA	89%		20-150%
	d7-MeFOSE	77%		20-150%
	d9-EtFOSE	82%		20-150%
	13C2-4:2FTS	111%		20-180%
	13C2-6:2FTS	103%		20-180%
	13C2-8:2FTS	102%		20-180%
	13C3-HFPO-DA	106%		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-2310		
Lab Sample ID:	FC10192-2	Date Sampled:	10/03/23
Matrix:	AQ - Ground Water	Date Received:	10/05/23
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	6Q25958.D	1	10/08/23 19:21	MV	10/07/23 08:10	OP99404	S6Q367
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	14	3.5	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	7.0	1.8	0.82	ng/l	
307-24-4	Perfluorohexanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
375-85-9	Perfluoroheptanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
335-67-1	Perfluorooctanoic acid	0.88 U	3.5	0.88	0.44	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.5	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.5	1.8	0.74	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.5	1.8	0.44	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.5 U	4.4	3.5	0.98	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	3.5	1.8	0.61	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.5	1.8	0.44	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.5	1.8	0.47	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.5	1.8	0.50	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.5	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	3.5	1.8	0.59	ng/l	
31506-32-8	MeFOSA	3.5 U	7.0	3.5	0.88	ng/l	
4151-50-2	EtFOSA	3.5 U	7.0	3.5	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

4.2
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Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2310		
Lab Sample ID:	FC10192-2	Date Sampled:	10/03/23
Matrix:	AQ - Ground Water	Date Received:	10/05/23
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	3.5 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	18 U	35	18	3.8	ng/l	
1691-99-2	EtFOSE	18 U	35	18	6.5	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	1.8 U	3.5	1.8	0.88	ng/l	
919005-14-4	ADONA	3.5 U	7.0	3.5	1.6	ng/l	
377-73-1	PFMPA	1.8 U	7.0	1.8	0.88	ng/l	
863090-89-5	PFMBA	3.5 U	7.0	3.5	1.0	ng/l	
151772-58-6	NFDHA	3.5 U	7.0	3.5	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.5 U	7.0	3.5	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.5 U	7.0	3.5	1.5	ng/l	
113507-82-7	PFEESA	1.8 U	7.0	1.8	0.68	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	8.8 U	18	8.8	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	88	18	7.7	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	88	18	6.9	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	40%		20-150%
	13C5-PFPeA	105%		20-150%
	13C5-PFHxA	103%		20-150%
	13C4-PFHpA	101%		20-150%
	13C8-PFOA	106%		20-150%
	13C9-PFNA	98%		20-150%
	13C6-PFDA	102%		20-150%
	13C7-PFUnDA	102%		20-150%
	13C2-PFDoDA	91%		20-150%
	13C2-PFTeDA	78%		20-150%
	13C3-PFBS	109%		20-150%
	13C3-PFHxS	114%		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

4.2
4

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2310		
Lab Sample ID:	FC10192-2	Date Sampled:	10/03/23
Matrix:	AQ - Ground Water	Date Received:	10/05/23
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	99%		20-150%
	13C8-FOSA	75%		20-150%
	d3-MeFOSA	81%		20-150%
	d5-EtFOSA	84%		20-150%
	d3-MeFOSAA	102%		20-150%
	d5-EtFOSAA	91%		20-150%
	d7-MeFOSE	75%		20-150%
	d9-EtFOSE	81%		20-150%
	13C2-4:2FTS	116%		20-180%
	13C2-6:2FTS	116%		20-180%
	13C2-8:2FTS	105%		20-180%
	13C3-HFPO-DA	106%		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-2310		
Lab Sample ID:	FC10192-3	Date Sampled:	10/03/23
Matrix:	AQ - Ground Water	Date Received:	10/05/23
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	6Q25960.D	1	10/08/23 19:49	MV	10/07/23 08:10	OP99404	S6Q367
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	3.6 U	15	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	7.3	1.8	0.85	ng/l	
307-24-4	Perfluorohexanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
375-85-9	Perfluoroheptanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.91 U	3.6	0.91	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.6	1.8	0.76	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.6	1.8	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	3.6	1.8	0.64	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.6	1.8	0.49	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.6	1.8	0.52	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.6	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	3.6	1.8	0.61	ng/l	
31506-32-8	MeFOSA	3.6 U	7.3	3.6	0.91	ng/l	
4151-50-2	EtFOSA	3.6 U	7.3	3.6	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-WGFD01LF-2310		
Lab Sample ID:	FC10192-3	Date Sampled:	10/03/23
Matrix:	AQ - Ground Water	Date Received:	10/05/23
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	18 U	36	18	4.0	ng/l	
1691-99-2	EtFOSE	18 U	36	18	6.7	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	1.8 U	3.6	1.8	0.91	ng/l	
919005-14-4	ADONA	3.6 U	7.3	3.6	1.7	ng/l	
377-73-1	PFMPA	1.8 U	7.3	1.8	0.91	ng/l	
863090-89-5	PFMBA	3.6 U	7.3	3.6	1.0	ng/l	
151772-58-6	NFDHA	3.6 U	7.3	3.6	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.6 U	7.3	3.6	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.6 U	7.3	3.6	1.6	ng/l	
113507-82-7	PFEESA	1.8 U	7.3	1.8	0.71	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	9.1 U	18	9.1	4.1	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	91	18	7.9	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	91	18	7.1	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	42%		20-150%
	13C5-PFPeA	107%		20-150%
	13C5-PFHxA	105%		20-150%
	13C4-PFHpA	106%		20-150%
	13C8-PFOA	107%		20-150%
	13C9-PFNA	104%		20-150%
	13C6-PFDA	98%		20-150%
	13C7-PFUnDA	99%		20-150%
	13C2-PFDoDA	84%		20-150%
	13C2-PFTeDA	75%		20-150%
	13C3-PFBS	105%		20-150%
	13C3-PFHxS	103%		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-2310	
Lab Sample ID:	FC10192-3	Date Sampled: 10/03/23
Matrix:	AQ - Ground Water	Date Received: 10/05/23
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	105%		20-150%
	13C8-FOSA	76%		20-150%
	d3-MeFOSA	86%		20-150%
	d5-EtFOSA	85%		20-150%
	d3-MeFOSAA	102%		20-150%
	d5-EtFOSAA	99%		20-150%
	d7-MeFOSE	74%		20-150%
	d9-EtFOSE	79%		20-150%
	13C2-4:2FTS	119%		20-180%
	13C2-6:2FTS	114%		20-180%
	13C2-8:2FTS	115%		20-180%
	13C3-HFPO-DA	103%		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

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

FC10192

COC #: 2310AFSG05

SGS - ORLANDO JOB #:

PAGE 1 OF 1

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes			
Company Name: AECOM		Project Name: N6274223F0104 RH Fire Suppression System												DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe			
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 # 23F0104 - 60697810															
Project Manager: Watson Tanji Email: watson.tanji@aecom.com		Fax #		PFAS EPA Draft 1633													
Phone #: 303-796-4624 / 808-954-4512		Client Purchase Order # 151253															
Sampler(s) Name(s) (Printed)		Sampler 1:		Sampler 2:													
SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION			CONTAINER INFORMATION										LAB USE ONLY		
		DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	FCI	NICH	MDS	HSBC	MACH-ZNAC	DI WATER		RECH	
2	AF-RHMW12A-WGN01LF-2310	10/2/23	1240	AA	GW	3		X									X
3	AF-RHMW12A-WGF01LF-2310	10/2/23	1240	AA	GW	3		X									X
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks									
10 Day (Business) 7 Day <input checked="" type="checkbox"/> 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other		Approved By: / Date:		<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 ANVBA: 016-97048733									
Rush TIA 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		Date Time:		Relinquished By/Affiliation		Date Time:		Received By/Affiliation					
1 Anne Aguiari / AECOM		10/2/23		2 Simone Ray / AECOM		10/3/23		3 Simone Ray / AECOM		10/3/23		4 UC					
Relinquished by/Affiliation		Date Time:		Received By/Affiliation		Date Time:		Relinquished By/Affiliation		Date Time:		Received By/Affiliation					
5 UC				6 [Signature] / [Signature]		10/05/23		7				8					
Lab Use Only: Cooler Temperature (s) Celsius (corrected):																	
http://www.sgs.com/en/terms-and-conditions																	

PFAS_COCs_ALL_10022023.xls Rev 031318

FC10192: Chain of Custody

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QC Evaluation: DOD QSM5.x Limits

Job Number: FC10192
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 10/03/23

QC Sample ID	CAS#	Analyte	Sample Result Type	Result Type	Units	Limits
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No DOD QSM5.x Limits found for methods in this job.

* Sample used for QC is not from job FC10192

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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: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q367-IBLK	6Q25948.D	1	10/08/23	MV	n/a	n/a	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	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	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	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	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q367-IBLK	6Q25948.D	1	10/08/23	MV	n/a	n/a	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	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	98%	20-150%
	13C8-PFOA	97%	20-150%
	13C9-PFNA	98%	20-150%
	13C6-PFDA	98%	20-150%
	13C7-PFUnDA	99%	20-150%
	13C2-PFDoDA	93%	20-150%
	13C2-PFTeDA	100%	20-150%
	13C3-PFBS	101%	20-150%
	13C3-PFHxS	102%	20-150%
	13C8-PFOS	97%	20-150%
	13C8-FOSA	98%	20-150%
	d3-MeFOSA	99%	20-150%
	d5-EtFOSA	96%	20-150%
	d3-MeFOSAA	100%	20-150%
	d5-EtFOSAA	103%	20-150%
	d7-MeFOSE	99%	20-150%
	d9-EtFOSE	99%	20-150%
	13C2-4:2FTS	102%	20-180%
	13C2-6:2FTS	103%	20-180%
	13C2-8:2FTS	99%	20-180%
	13C3-HFPO-DA	97%	20-150%

6.1.1
6

Instrument Blank

Job Number: FC10192
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q367-IBLK	6Q26048.D	1	10/09/23	MV	n/a	n/a	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	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	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	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	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q367-IBLK	6Q26048.D	1	10/09/23	MV	n/a	n/a	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	101% 20-150%
	13C5-PFHxA	102% 20-150%
	13C4-PFHpA	101% 20-150%
	13C8-PFOA	102% 20-150%
	13C9-PFNA	107% 20-150%
	13C6-PFDA	109% 20-150%
	13C7-PFUnDA	106% 20-150%
	13C2-PFDoDA	98% 20-150%
	13C2-PFTeDA	106% 20-150%
	13C3-PFBS	103% 20-150%
	13C3-PFHxS	102% 20-150%
	13C8-PFOS	98% 20-150%
	13C8-FOSA	101% 20-150%
	d3-MeFOSA	95% 20-150%
	d5-EtFOSA	99% 20-150%
	d3-MeFOSAA	101% 20-150%
	d5-EtFOSAA	100% 20-150%
	d7-MeFOSE	97% 20-150%
	d9-EtFOSE	96% 20-150%
	13C2-4:2FTS	116% 20-180%
	13C2-6:2FTS	104% 20-180%
	13C2-8:2FTS	106% 20-180%
	13C3-HFPO-DA	103% 20-150%

6.12
6

Method Blank Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-MB	6Q25955.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	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	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	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	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Method Blank Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-MB	6Q25955.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	106% 20-150%
	13C5-PFPeA	110% 20-150%
	13C5-PFHxA	109% 20-150%
	13C4-PFHpA	103% 20-150%
	13C8-PFOA	105% 20-150%
	13C9-PFNA	102% 20-150%
	13C6-PFDA	106% 20-150%
	13C7-PFUnDA	111% 20-150%
	13C2-PFDoDA	104% 20-150%
	13C2-PFTeDA	97% 20-150%
	13C3-PFBS	107% 20-150%
	13C3-PFHxS	102% 20-150%
	13C8-PFOS	95% 20-150%
	13C8-FOSA	69% 20-150%
	d3-MeFOSA	80% 20-150%
	d5-EtFOSA	78% 20-150%
	d3-MeFOSAA	92% 20-150%
	d5-EtFOSAA	95% 20-150%
	d7-MeFOSE	70% 20-150%
	d9-EtFOSE	75% 20-150%
	13C2-4:2FTS	118% 20-180%
	13C2-6:2FTS	109% 20-180%
	13C2-8:2FTS	97% 20-180%
	13C3-HFPO-DA	106% 20-150%

6.1.3
6

Continuing Calibration Blank

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q367-ICCB	6Q26044.D	1	10/09/23	MV	n/a	n/a	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q367-IBLK

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	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	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	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	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

6.1.4
6

Continuing Calibration Blank

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q367-ICCB	6Q26044.D	1	10/09/23	MV	n/a	n/a	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q367-IBLK

CAS No.	Compound	Result	RL	MDL	Units	Q
113507-82-7	PFEESA	ND	0.0080	0.00078	ug/l	
356-02-5	3:3 Fluorotelomer carboxylate	ND	0.020	0.0045	ug/l	
914637-49-35:3	Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	100% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	97% 20-150%
	13C8-PFOA	100% 20-150%
	13C9-PFNA	102% 20-150%
	13C6-PFDA	102% 20-150%
	13C7-PFUnDA	98% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	102% 20-150%
	13C3-PFBS	102% 20-150%
	13C3-PFHxS	104% 20-150%
	13C8-PFOS	98% 20-150%
	13C8-FOSA	99% 20-150%
	d3-MeFOSAA	109% 20-150%
	d5-EtFOSAA	107% 20-150%
	13C2-4:2FTS	109% 20-180%
	13C2-6:2FTS	108% 20-180%
	13C2-8:2FTS	108% 20-180%

Blank Spike Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-LLBS	6Q25954.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0298	99	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0146	97	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0077	103	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0071	95	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0071	95	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0078	104	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0074	99	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0078	104	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0072	96	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0071	95	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0070	93	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0068	102	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0069	98	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0063	92	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0069	97	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0066	95	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0067	93	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0066	91	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0069	95	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0268	95	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	0.0293	102	40-150
754-91-6	PFOSA	0.0075	0.0086	115	40-150
31506-32-8	MeFOSA	0.015	0.0161	107	40-150
4151-50-2	EtFOSA	0.015	0.0150	100	40-150
2355-31-9	MeFOSAA	0.0075	0.0074	99	40-150
2991-50-6	EtFOSAA	0.0075	0.0075	100	40-150
24448-09-7	MeFOSE	0.0375	0.0362	97	40-150
1691-99-2	EtFOSE	0.0375	0.0374	100	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0147	98	40-150
919005-14-4	ADONA	0.0142	0.0142	100	40-150
377-73-1	PFMPA	0.015	0.0153	102	40-150
863090-89-5	PFMBA	0.015	0.0151	101	40-150
151772-58-6	NFDHA	0.015	0.0163	109	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.014	0.0136	97	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0142	0.0134	95	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-LLBS	6Q25954.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0127	95	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0299	80	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.175	93	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.183	98	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	108%	20-150%
	13C5-PFPeA	107%	20-150%
	13C5-PFHxA	107%	20-150%
	13C4-PFHpA	107%	20-150%
	13C8-PFOA	103%	20-150%
	13C9-PFNA	100%	20-150%
	13C6-PFDA	108%	20-150%
	13C7-PFUnDA	106%	20-150%
	13C2-PFDoDA	104%	20-150%
	13C2-PFTeDA	99%	20-150%
	13C3-PFBS	105%	20-150%
	13C3-PFHxS	107%	20-150%
	13C8-PFOS	110%	20-150%
	13C8-FOSA	69%	20-150%
	d3-MeFOSA	70%	20-150%
	d5-EtFOSA	72%	20-150%
	d3-MeFOSAA	105%	20-150%
	d5-EtFOSAA	99%	20-150%
	d7-MeFOSE	67%	20-150%
	d9-EtFOSE	72%	20-150%
	13C2-4:2FTS	121%	20-180%
	13C2-6:2FTS	106%	20-180%
	13C2-8:2FTS	105%	20-180%
	13C3-HFPO-DA	108%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-BS	6Q25953.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0993	99	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0506	101	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0246	98	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0252	101	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0236	94	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0251	100	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0253	101	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0249	100	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0283	113	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0265	106	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0265	106	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0227	102	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0236	100	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0214	94	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0222	93	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0225	97	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0230	96	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0210	87	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0225	93	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0898	96	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.101	106	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0919	96	40-150
754-91-6	PFOSA	0.025	0.0257	103	40-150
31506-32-8	MeFOSA	0.05	0.0530	106	40-150
4151-50-2	EtFOSA	0.05	0.0517	103	40-150
2355-31-9	MeFOSAA	0.025	0.0258	103	40-150
2991-50-6	EtFOSAA	0.025	0.0240	96	40-150
24448-09-7	MeFOSE	0.125	0.126	101	40-150
1691-99-2	EtFOSE	0.125	0.131	105	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0515	103	40-150
919005-14-4	ADONA	0.0473	0.0489	103	40-150
377-73-1	PFMPA	0.05	0.0332	66	40-150
863090-89-5	PFMBA	0.05	0.0517	103	40-150
151772-58-6	NFDHA	0.05	0.0496	99	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0471	101	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0473	100	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-BS	6Q25953.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0440	99	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.171	137	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.563	90	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.575	92	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	36%	20-150%
	13C5-PFPeA	98%	20-150%
	13C5-PFHxA	103%	20-150%
	13C4-PFHpA	99%	20-150%
	13C8-PFOA	102%	20-150%
	13C9-PFNA	102%	20-150%
	13C6-PFDA	101%	20-150%
	13C7-PFUnDA	103%	20-150%
	13C2-PFDoDA	93%	20-150%
	13C2-PFTeDA	91%	20-150%
	13C3-PFBS	102%	20-150%
	13C3-PFHxS	102%	20-150%
	13C8-PFOS	109%	20-150%
	13C8-FOSA	73%	20-150%
	d3-MeFOSA	75%	20-150%
	d5-EtFOSA	81%	20-150%
	d3-MeFOSAA	100%	20-150%
	d5-EtFOSAA	103%	20-150%
	d7-MeFOSE	70%	20-150%
	d9-EtFOSE	73%	20-150%
	13C2-4:2FTS	112%	20-180%
	13C2-6:2FTS	103%	20-180%
	13C2-8:2FTS	101%	20-180%
	13C3-HFPO-DA	98%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-MS	6Q25957.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367
FC10192-1	6Q25956.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	FC10192-1 ug/l	Spike Q	ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.015 U		0.0962	0.0905	94	40-150
2706-90-3	Perfluoropentanoic acid	0.0077 U		0.0481	0.0447	93	40-150
307-24-4	Perfluorohexanoic acid	0.0038 U		0.024	0.0225	94	40-150
375-85-9	Perfluoroheptanoic acid	0.0038 U		0.024	0.0241	100	40-150
335-67-1	Perfluorooctanoic acid	0.0038 U		0.024	0.0229	95	40-150
375-95-1	Perfluorononanoic acid	0.0038 U		0.024	0.0237	99	40-150
335-76-2	Perfluorodecanoic acid	0.0038 U		0.024	0.0221	92	40-150
2058-94-8	Perfluoroundecanoic acid	0.0038 U		0.024	0.0226	94	40-150
307-55-1	Perfluorododecanoic acid	0.0038 U		0.024	0.0224	93	40-150
72629-94-8	Perfluorotridecanoic acid	0.0038 U		0.024	0.0224	93	40-150
376-06-7	Perfluorotetradecanoic acid	0.0038 U		0.024	0.0220	92	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0038 U		0.0213	0.0206	97	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0048 U		0.0226	0.0202	89	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0038 U		0.022	0.0192	87	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0038 U		0.0229	0.0249	109	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0038 U		0.0223	0.0211	95	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0038 U		0.0231	0.0187	81	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0038 U		0.0232	0.0196	84	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0048 U		0.0233	0.0192	82	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.019 U		0.0901	0.0840	93	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.019 U		0.0913	0.0977	107	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.019 U		0.0923	0.0873	95	40-150
754-91-6	PFOSA	0.0038 U		0.024	0.0280	116	40-150
31506-32-8	MeFOSA	0.0077 U		0.0481	0.0474	99	40-150
4151-50-2	EtFOSA	0.0077 U		0.0481	0.0456	95	40-150
2355-31-9	MeFOSAA	0.0048 U		0.024	0.0217	90	40-150
2991-50-6	EtFOSAA	0.0048 U		0.024	0.0222	92	40-150
24448-09-7	MeFOSE	0.038 U		0.12	0.117	97	40-150
1691-99-2	EtFOSE	0.038 U		0.12	0.116	97	40-150
13252-13-6	HFPO-DA (GenX)	0.0038 U		0.0481	0.0483	100	40-150
919005-14-4	ADONA	0.0077 U		0.0454	0.0443	98	40-150
377-73-1	PFMPA	0.0077 U		0.0481	0.0465	97	40-150
863090-89-5	PFMBA	0.0077 U		0.0481	0.0448	93	40-150
151772-58-6	NFDHA	0.0077 U		0.0481	0.0459	95	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0077 U		0.045	0.0375	83	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0077 U		0.0454	0.0358	79	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-MS	6Q25957.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367
FC10192-1	6Q25956.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	FC10192-1 ug/l	Spike Q	ug/l	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0077 U	0.0428	0.0407	95	40-150	
356-02-5	3:3 Fluorotelomer carboxylate	0.019 U	0.12	0.0919	76	40-150	
914637-49-35:3	Fluorotelomer carboxylate	0.096 U	0.601	0.536	89	40-150	
812-70-4	7:3 Fluorotelomer carboxylate	0.096 U	0.601	0.559	93	40-150	

CAS No.	ID Standard Recoveries	MS	FC10192-1	Limits
	13C4-PFBA	106%	103%	20-150%
	13C5-PFPeA	105%	103%	20-150%
	13C5-PFHxA	106%	100%	20-150%
	13C4-PFHpA	100%	100%	20-150%
	13C8-PFOA	104%	105%	20-150%
	13C9-PFNA	95%	95%	20-150%
	13C6-PFDA	95%	105%	20-150%
	13C7-PFUnDA	88%	106%	20-150%
	13C2-PFDoDA	84%	89%	20-150%
	13C2-PFTeDA	78%	84%	20-150%
	13C3-PFBS	105%	103%	20-150%
	13C3-PFHxS	109%	104%	20-150%
	13C8-PFOS	89%	95%	20-150%
	13C8-FOSA	71%	74%	20-150%
	d3-MeFOSA	74%	81%	20-150%
	d5-EtFOSA	75%	80%	20-150%
	d3-MeFOSAA	93%	99%	20-150%
	d5-EtFOSAA	84%	89%	20-150%
	d7-MeFOSE	73%	77%	20-150%
	d9-EtFOSE	74%	82%	20-150%
	13C2-4:2FTS	115%	111%	20-180%
	13C2-6:2FTS	100%	103%	20-180%
	13C2-8:2FTS	97%	102%	20-180%
	13C3-HFPO-DA	101%	106%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-DUP	6Q25959.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367
FC10192-2	6Q25958.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	FC10192-2 ug/l	DUP Q	ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.014 U	ND		nc		30
2706-90-3	Perfluoropentanoic acid	0.0070 U	ND		nc		30
307-24-4	Perfluorohexanoic acid	0.0035 U	ND		nc		30
375-85-9	Perfluoroheptanoic acid	0.0035 U	ND		nc		30
335-67-1	Perfluorooctanoic acid	0.0035 U	ND		nc		30
375-95-1	Perfluorononanoic acid	0.0035 U	ND		nc		30
335-76-2	Perfluorodecanoic acid	0.0035 U	ND		nc		30
2058-94-8	Perfluoroundecanoic acid	0.0035 U	ND		nc		30
307-55-1	Perfluorododecanoic acid	0.0035 U	ND		nc		30
72629-94-8	Perfluorotridecanoic acid	0.0035 U	ND		nc		30
376-06-7	Perfluorotetradecanoic acid	0.0035 U	ND		nc		30
375-73-5	Perfluorobutanesulfonic acid	0.0035 U	ND		nc		30
2706-91-4	Perfluoropentanesulfonic acid	0.0044 U	ND		nc		30
355-46-4	Perfluorohexanesulfonic acid	0.0035 U	ND		nc		30
375-92-8	Perfluoroheptanesulfonic acid	0.0035 U	ND		nc		30
1763-23-1	Perfluorooctanesulfonic acid	0.0035 U	ND		nc		30
68259-12-1	Perfluorononanesulfonic acid	0.0035 U	ND		nc		30
335-77-3	Perfluorodecanesulfonic acid	0.0035 U	ND		nc		30
79780-39-5	Perfluorododecanesulfonic aci	0.0044 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	0.0035 U	ND		nc		30
31506-32-8	MeFOSA	0.0070 U	ND		nc		30
4151-50-2	EtFOSA	0.0070 U	ND		nc		30
2355-31-9	MeFOSAA	0.0044 U	ND		nc		30
2991-50-6	EtFOSAA	0.0044 U	ND		nc		30
24448-09-7	MeFOSE	0.035 U	ND		nc		30
1691-99-2	EtFOSE	0.035 U	ND		nc		30
13252-13-6	HFPO-DA (GenX)	0.0035 U	ND		nc		30
919005-14-4	ADONA	0.0070 U	ND		nc		30
377-73-1	PFMPA	0.0070 U	ND		nc		30
863090-89-5	PFMBA	0.0070 U	ND		nc		30
151772-58-6	NFDHA	0.0070 U	ND		nc		30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0070 U	ND		nc		30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0070 U	ND		nc		30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC10192
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99404-DUP	6Q25959.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367
FC10192-2	6Q25958.D	1	10/08/23	MV	10/07/23	OP99404	S6Q367

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC10192-1, FC10192-2, FC10192-3

CAS No.	Compound	FC10192-2 ug/l	DUP Q	ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0070 U	ND			nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.018 U	ND			nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.088 U	ND			nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.088 U	ND			nc	30

CAS No.	ID Standard Recoveries	DUP	FC10192-2	Limits
	13C4-PFBA	41%	40%	20-150%
	13C5-PFPeA	103%	105%	20-150%
	13C5-PFHxA	104%	103%	20-150%
	13C4-PFHpA	104%	101%	20-150%
	13C8-PFOA	104%	106%	20-150%
	13C9-PFNA	103%	98%	20-150%
	13C6-PFDA	101%	102%	20-150%
	13C7-PFUnDA	101%	102%	20-150%
	13C2-PFDoDA	83%	91%	20-150%
	13C2-PFTeDA	79%	78%	20-150%
	13C3-PFBS	105%	109%	20-150%
	13C3-PFHxS	109%	114%	20-150%
	13C8-PFOS	102%	99%	20-150%
	13C8-FOSA	82%	75%	20-150%
	d3-MeFOSA	83%	81%	20-150%
	d5-EtFOSA	80%	84%	20-150%
	d3-MeFOSAA	90%	102%	20-150%
	d5-EtFOSAA	87%	91%	20-150%
	d7-MeFOSE	76%	75%	20-150%
	d9-EtFOSE	76%	81%	20-150%
	13C2-4:2FTS	110%	116%	20-180%
	13C2-6:2FTS	105%	116%	20-180%
	13C2-8:2FTS	98%	105%	20-180%
	13C3-HFPO-DA	105%	106%	20-150%

* = Outside of Control Limits.