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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC11894

Sampling Date: 12/08/23



Report to:

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Total number of pages in report: 39



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

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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.

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Sample Summary

AECOM, INC.

Job No: FC11894

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC11894-1	12/08/23	09:55 LS	12/12/23	AQ	Ground Water	AF-HDMW225303-WGN01LF-2312
FC11894-2	12/08/23	12:45 MY	12/12/23	AQ	Ground Water	AF-RHMW03-WGN01LF-2312
FC11894-3	12/08/23	11:05 MY	12/12/23	AQ	Ground Water	AF-RHMW02-WGN01LF-2312
FC11894-4	12/08/23	11:05 MY	12/12/23	AQ	Ground Water	AF-RHMW02-WGFD01LF-2312

SAMPLE DELIVERY GROUP CASE NARRATIVE

2

Client: AECOM, INC.

Job No: FC11894

Site: N6274223F0104 RH Fire Suppression System

Report Date: 12/18/2023 4:18:13

On 12/12/2023, 4 Sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC11894 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: OP635

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FC11894-2MS, FC11894-3DUP 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: FC11894
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 12/08/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FC11894-1 AF-HDMW225303-WGN01LF-2312

No hits reported in this sample.

FC11894-2 AF-RHMW03-WGN01LF-2312

Perfluoropentanoic acid	2.7 J	7.1	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid	2.6 J	3.6	1.8	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid	1.7 J	3.6	1.8	ng/l	EPA DRAFT 1633
6:2 Fluorotelomer sulfonate	4.3 J	18	7.1	ng/l	EPA DRAFT 1633

FC11894-3 AF-RHMW02-WGN01LF-2312

No hits reported in this sample.

FC11894-4 AF-RHMW02-WGFD01LF-2312

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2312		
Lab Sample ID:	FC11894-1	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	4Q55109.D	1	12/15/23 13:58	AL	12/14/23 08:00	OP635	S4Q809
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	15	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	7.5	1.9	0.89	ng/l	
307-24-4	Perfluorohexanoic acid	1.9 U	3.8	1.9	0.47	ng/l	
375-85-9	Perfluoroheptanoic acid	1.9 U	3.8	1.9	0.47	ng/l	
335-67-1	Perfluorooctanoic acid	0.94 U	3.8	0.94	0.47	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	3.8	1.9	0.58	ng/l	
335-76-2	Perfluorodecanoic acid	1.9 U	3.8	1.9	0.47	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	3.8	1.9	0.57	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	3.8	1.9	0.57	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	3.8	1.9	0.79	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.9 U	3.8	1.9	0.47	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.9 U	3.8	1.9	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	3.8	1.9	0.66	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.9 U	3.8	1.9	0.47	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	3.8	1.9	0.51	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	3.8	1.9	0.54	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	3.8	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	3.8	1.9	0.63	ng/l	
31506-32-8	MeFOSA	3.8 U	7.5	3.8	0.94	ng/l	
4151-50-2	EtFOSA	3.8 U	7.5	3.8	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

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2312		
Lab Sample ID:	FC11894-1	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	19 U	38	19	4.1	ng/l
1691-99-2	EtFOSE	19 U	38	19	7.0	ng/l

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	1.9 U	3.8	1.9	0.94	ng/l
919005-14-4	ADONA	3.8 U	7.5	3.8	1.8	ng/l
377-73-1	PFMPA	1.9 U	7.5	1.9	0.94	ng/l
863090-89-5	PFMBA	3.8 U	7.5	3.8	1.1	ng/l
151772-58-6	NFDHA	3.8 U	7.5	3.8	1.1	ng/l

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	7.5	3.8	1.3	ng/l
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	7.5	3.8	1.7	ng/l
113507-82-7	PFEESA	1.9 U	7.5	1.9	0.74	ng/l

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	9.4 U	19	9.4	4.3	ng/l
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	94	19	8.2	ng/l
812-70-4	7:3 Fluorotelomer carboxylate	19 U	94	19	7.4	ng/l

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

13C4-PFBA	116%	20-150%
13C5-PFPeA	118%	20-150%
13C5-PFHxA	115%	20-150%
13C4-PFHpA	117%	20-150%
13C8-PFOA	116%	20-150%
13C9-PFNA	116%	20-150%
13C6-PFDA	116%	20-150%
13C7-PFUnDA	113%	20-150%
13C2-PFDoDA	102%	20-150%
13C2-PFTeDA	96%	20-150%
13C3-PFBS	115%	20-150%
13C3-PFHxS	123%	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-2312		
Lab Sample ID:	FC11894-1	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	111%		20-150%
	13C8-FOSA	72%		20-150%
	d3-MeFOSA	72%		20-150%
	d5-EtFOSA	84%		20-150%
	d3-MeFOSAA	102%		20-150%
	d5-EtFOSAA	102%		20-150%
	d7-MeFOSE	63%		20-150%
	d9-EtFOSE	89%		20-150%
	13C2-4:2FTS	104%		20-180%
	13C2-6:2FTS	110%		20-180%
	13C2-8:2FTS	105%		20-180%
	13C3-HFPO-DA	120%		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-RHMW03-WGN01LF-2312		
Lab Sample ID:	FC11894-2	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	4Q55111.D	1	12/15/23 14:28	AL	12/14/23 08:00	OP635	S4Q809
Run #2							

Run #	Initial Volume	Final Volume
Run #1	560 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	14	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	2.7	7.1	1.8	0.84	ng/l	J
307-24-4	Perfluorohexanoic acid	2.6	3.6	1.8	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.7	3.6	1.8	0.45	ng/l	J
335-67-1	Perfluorooctanoic acid	0.89 U	3.6	0.89	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.6	1.8	0.54	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	0.54	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.6	1.8	0.54	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.6	1.8	0.75	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	0.62	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	0.48	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.6	1.8	0.51	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.6	1.8	0.57	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	7.1 U	18	7.1	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	4.3	18	7.1	3.1	ng/l	J
39108-34-4	8:2 Fluorotelomer sulfonate	7.1 U	18	7.1	3.7	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.8 U	3.6	1.8	0.60	ng/l	
31506-32-8	MeFOSA	3.6 U	7.1	3.6	0.89	ng/l	
4151-50-2	EtFOSA	3.6 U	7.1	3.6	0.89	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

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Report of Analysis

Client Sample ID:	AF-RHMW03-WGN01LF-2312		
Lab Sample ID:	FC11894-2	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	0.89	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	3.9	ng/l	
1691-99-2	EtFOSE	18 U	36	18	6.6	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	1.8 U	3.6	1.8	0.89	ng/l	
919005-14-4	ADONA	3.6 U	7.1	3.6	1.7	ng/l	
377-73-1	PFMPA	1.8 U	7.1	1.8	0.89	ng/l	
863090-89-5	PFMBA	3.6 U	7.1	3.6	1.0	ng/l	
151772-58-6	NFDHA	3.6 U	7.1	3.6	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.6 U	7.1	3.6	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.6 U	7.1	3.6	1.6	ng/l	
113507-82-7	PFEESA	1.8 U	7.1	1.8	0.70	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	8.9 U	18	8.9	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	89	18	7.8	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	89	18	7.0	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	89%		20-150%
	13C5-PFPeA	92%		20-150%
	13C5-PFHxA	88%		20-150%
	13C4-PFHpA	92%		20-150%
	13C8-PFOA	90%		20-150%
	13C9-PFNA	90%		20-150%
	13C6-PFDA	91%		20-150%
	13C7-PFUnDA	90%		20-150%
	13C2-PFDoDA	81%		20-150%
	13C2-PFTeDA	78%		20-150%
	13C3-PFBS	94%		20-150%
	13C3-PFHxS	94%		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-RHMW03-WGN01LF-2312	
Lab Sample ID:	FC11894-2	Date Sampled: 12/08/23
Matrix:	AQ - Ground Water	Date Received: 12/12/23
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	83%		20-150%
	13C8-FOSA	69%		20-150%
	d3-MeFOSA	54%		20-150%
	d5-EtFOSA	58%		20-150%
	d3-MeFOSAA	79%		20-150%
	d5-EtFOSAA	84%		20-150%
	d7-MeFOSE	55%		20-150%
	d9-EtFOSE	69%		20-150%
	13C2-4:2FTS	93%		20-180%
	13C2-6:2FTS	78%		20-180%
	13C2-8:2FTS	77%		20-180%
	13C3-HFPO-DA	94%		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-RHMW02-WGN01LF-2312		
Lab Sample ID:	FC11894-3	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	4Q55114.D	1	12/15/23 15:12	AL	12/14/23 08:00	OP635	S4Q809
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

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-RHMW02-WGN01LF-2312	
Lab Sample ID:	FC11894-3	Date Sampled: 12/08/23
Matrix:	AQ - Ground Water	Date Received: 12/12/23
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	95%		20-150%
	13C5-PFPeA	113%		20-150%
	13C5-PFHxA	111%		20-150%
	13C4-PFHpA	115%		20-150%
	13C8-PFOA	109%		20-150%
	13C9-PFNA	109%		20-150%
	13C6-PFDA	109%		20-150%
	13C7-PFUnDA	105%		20-150%
	13C2-PFDoDA	97%		20-150%
	13C2-PFTeDA	83%		20-150%
	13C3-PFBS	114%		20-150%
	13C3-PFHxS	124%		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-RHMW02-WGN01LF-2312	
Lab Sample ID:	FC11894-3	Date Sampled: 12/08/23
Matrix:	AQ - Ground Water	Date Received: 12/12/23
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	97%		20-150%
	13C8-FOSA	86%		20-150%
	d3-MeFOSA	84%		20-150%
	d5-EtFOSA	89%		20-150%
	d3-MeFOSAA	97%		20-150%
	d5-EtFOSAA	99%		20-150%
	d7-MeFOSE	65%		20-150%
	d9-EtFOSE	86%		20-150%
	13C2-4:2FTS	103%		20-180%
	13C2-6:2FTS	96%		20-180%
	13C2-8:2FTS	90%		20-180%
	13C3-HFPO-DA	111%		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-RHMW02-WGFD01LF-2312		
Lab Sample ID:	FC11894-4	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	4Q55119.D	1	12/15/23 16:26	AL	12/14/23 08:00	OP635	S4Q809
Run #2							

Run #	Initial Volume	Final Volume
Run #1	560 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	14	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	7.1	1.8	0.84	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	0.89 U	3.6	0.89	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.6	1.8	0.54	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	0.54	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.6	1.8	0.54	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.6	1.8	0.75	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	0.62	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	0.48	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.6	1.8	0.51	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.6	1.8	0.57	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	7.1 U	18	7.1	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.1 U	18	7.1	3.1	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.1 U	18	7.1	3.7	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.8 U	3.6	1.8	0.60	ng/l	
31506-32-8	MeFOSA	3.6 U	7.1	3.6	0.89	ng/l	
4151-50-2	EtFOSA	3.6 U	7.1	3.6	0.89	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

4.4
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Report of Analysis

Client Sample ID:	AF-RHMW02-WGFD01LF-2312		
Lab Sample ID:	FC11894-4	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	3.6 U	4.5	3.6	0.89	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	3.9	ng/l
1691-99-2	EtFOSE	18 U	36	18	6.6	ng/l

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	1.8 U	3.6	1.8	0.89	ng/l
919005-14-4	ADONA	3.6 U	7.1	3.6	1.7	ng/l
377-73-1	PFMPA	1.8 U	7.1	1.8	0.89	ng/l
863090-89-5	PFMBA	3.6 U	7.1	3.6	1.0	ng/l
151772-58-6	NFDHA	3.6 U	7.1	3.6	1.1	ng/l

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.6 U	7.1	3.6	1.2	ng/l
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.6 U	7.1	3.6	1.6	ng/l
113507-82-7	PFEESA	1.8 U	7.1	1.8	0.70	ng/l

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	8.9 U	18	8.9	4.0	ng/l
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	89	18	7.8	ng/l
812-70-4	7:3 Fluorotelomer carboxylate	18 U	89	18	7.0	ng/l

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

13C4-PFBA	110%	20-150%
13C5-PFPeA	126%	20-150%
13C5-PFHxA	126%	20-150%
13C4-PFHpA	132%	20-150%
13C8-PFOA	124%	20-150%
13C9-PFNA	122%	20-150%
13C6-PFDA	121%	20-150%
13C7-PFUnDA	109%	20-150%
13C2-PFDoDA	89%	20-150%
13C2-PFTeDA	75%	20-150%
13C3-PFBS	120%	20-150%
13C3-PFHxS	129%	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

4.4
 4

Report of Analysis

Client Sample ID:	AF-RHMW02-WGFD01LF-2312		
Lab Sample ID:	FC11894-4	Date Sampled:	12/08/23
Matrix:	AQ - Ground Water	Date Received:	12/12/23
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	109%		20-150%
	d3-MeFOSA	92%		20-150%
	d5-EtFOSA	98%		20-150%
	d3-MeFOSAA	107%		20-150%
	d5-EtFOSAA	103%		20-150%
	d7-MeFOSE	80%		20-150%
	d9-EtFOSE	95%		20-150%
	13C2-4:2FTS	126%		20-180%
	13C2-6:2FTS	107%		20-180%
	13C2-8:2FTS	98%		20-180%
	13C3-HFPO-DA	123%		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 Vineyard Road, Suite C-15 Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.sgs.com

COC #: 2312AFSG04

SGS - ORLANDO JOB # :

PAGE 1 OF 1

FC11894

SGS - ORLANDO Quote #

SKIFF #

Client / Reporting Information			Project Information			Analytical Information										Matrix Codes
Company Name: AECOM			Project Name: N6274223F0104 RH Fire Suppression System			<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">PFAS EPA Draft 1683</div> <div style="text-align: right;"> <p>12.08.23</p> <p>12.08.23</p> </div> </div>										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 Tanil Email: watson.tanil@aecom.com			Fax #													
Phone #: 303-796-4624 / 808-954-4512			Client Purchase Order # 151253													
Sampler(s) Name(s) (Printed) Max Martin Sampler 1: Laine Sakai Sampler 2: Joyce Villalobos																
SGS Orlando Sample #	COLLECTION			CONTAINER INFORMATION										LAB USE ONLY		
	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	HNO3	H2O2	HFSCA	HAHF-ZnAC		D WATER	MECH
1	AF-HDMW225303-WGN01LF-2312	12.08.23	0956	LS	GW	3	X									X
INITIAL ASSESSMENT																
LABEL VERIFICATION																
Turnaround Time (Business days)			Data Deliverable Information										Comments / Remarks			
10 Day (Business) Approved By: / Date: 7 Day 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other			<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 AWO: 016-96709454			
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		Date Time:		Received By/Affiliation		
1 Laine Sakai		12.08.23		2 Alex Edwards AECOM		3 Alex Edwards AECOM		12/12/23 12:55		4 [Signature]		12/12/23		1700		
5		6		7		8										
Lab Use Only: Cooler Temperature (s) Celsius (corrected): 1.6 IRI																

5.1
5

PFAS_COCs_ALL_12042023.xls Rev 031318

FC11894: Chain of Custody

Page 1 of 4



QC Evaluation: DOD QSM5.x Limits

Job Number: FC11894
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 12/08/23

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 FC11894

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: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q809-IBLK	4Q55103.D	1	12/15/23	AL	n/a	n/a	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

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	0.0019	0.0080	0.0010	ug/l	J
4151-50-2	EtFOSA	0.0018	0.0080	0.0010	ug/l	J
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	0.0048	0.040	0.0044	ug/l	J
1691-99-2	EtFOSE	0.0075	0.040	0.0074	ug/l	J
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: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q809-IBLK	4Q55103.D	1	12/15/23	AL	n/a	n/a	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

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	98% 20-150%
	13C5-PFPeA	100% 20-150%
	13C5-PFHxA	99% 20-150%
	13C4-PFHpA	99% 20-150%
	13C8-PFOA	100% 20-150%
	13C9-PFNA	106% 20-150%
	13C6-PFDA	97% 20-150%
	13C7-PFUnDA	101% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	102% 20-150%
	13C3-PFBS	107% 20-150%
	13C3-PFHxS	105% 20-150%
	13C8-PFOS	92% 20-150%
	13C8-FOSA	90% 20-150%
	d3-MeFOSAA	80% 20-150%
	d5-EtFOSAA	81% 20-150%
	13C2-4:2FTS	98% 20-180%
	13C2-6:2FTS	92% 20-180%
	13C2-8:2FTS	82% 20-180%

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Continuing Calibration Blank

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q809-ICCB	4Q55117.D	1	12/15/23	AL	n/a	n/a	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-4

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	

Continuing Calibration Blank

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q809-ICCB	4Q55117.D	1	12/15/23	AL	n/a	n/a	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-4

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	102% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	101% 20-150%
	13C8-PFOA	99% 20-150%
	13C9-PFNA	104% 20-150%
	13C6-PFDA	102% 20-150%
	13C7-PFUnDA	104% 20-150%
	13C2-PFDoDA	98% 20-150%
	13C2-PFTeDA	97% 20-150%
	13C3-PFBS	96% 20-150%
	13C3-PFHxS	100% 20-150%
	13C8-PFOS	96% 20-150%
	13C8-FOSA	95% 20-150%
	d3-MeFOSAA	97% 20-150%
	d5-EtFOSAA	93% 20-150%
	13C2-4:2FTS	107% 20-180%
	13C2-6:2FTS	97% 20-180%
	13C2-8:2FTS	92% 20-180%

Method Blank Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-MB	4Q55108.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

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: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-MB	4Q55108.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

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	124% 20-150%
	13C5-PFPeA	127% 20-150%
	13C5-PFHxA	122% 20-150%
	13C4-PFHpA	123% 20-150%
	13C8-PFOA	118% 20-150%
	13C9-PFNA	118% 20-150%
	13C6-PFDA	123% 20-150%
	13C7-PFUnDA	119% 20-150%
	13C2-PFDoDA	110% 20-150%
	13C2-PFTeDA	105% 20-150%
	13C3-PFBS	115% 20-150%
	13C3-PFHxS	128% 20-150%
	13C8-PFOS	105% 20-150%
	13C8-FOSA	68% 20-150%
	d3-MeFOSA	71% 20-150%
	d5-EtFOSA	76% 20-150%
	d3-MeFOSAA	98% 20-150%
	d5-EtFOSAA	99% 20-150%
	d7-MeFOSE	64% 20-150%
	d9-EtFOSE	87% 20-150%
	13C2-4:2FTS	121% 20-180%
	13C2-6:2FTS	112% 20-180%
	13C2-8:2FTS	122% 20-180%
	13C3-HFPO-DA	131% 20-150%

Blank Spike Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-LLBS	4Q55107.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0320	107	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0155	103	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0079	105	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0077	103	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0074	99	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0077	103	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0073	97	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0081	108	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0079	105	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0075	100	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0079	105	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0072	108	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0068	96	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0074	108	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0079	111	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0076	109	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0076	105	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0070	97	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0077	106	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0275	98	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0303	106	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0271	94	40-150
754-91-6	PFOSA	0.0075	0.0079	105	40-150
31506-32-8	MeFOSA	0.015	0.0143	95	40-150
4151-50-2	EtFOSA	0.015	0.0146	97	40-150
2355-31-9	MeFOSAA	0.0075	0.0081	108	40-150
2991-50-6	EtFOSAA	0.0075	0.0084	112	40-150
24448-09-7	MeFOSE	0.0375	0.0369	98	40-150
1691-99-2	EtFOSE	0.0375	0.0367	98	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0151	101	40-150
919005-14-4	ADONA	0.0142	0.0143	101	40-150
377-73-1	PFMPA	0.015	0.0159	106	40-150
863090-89-5	PFMBA	0.015	0.0152	101	40-150
151772-58-6	NFDHA	0.015	0.0198	132	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.014	0.0142	101	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0142	0.0130	92	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-LLBS	4Q55107.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0149	112	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0309	82	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.183	98	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.194	103	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	114%	20-150%
	13C5-PFPeA	116%	20-150%
	13C5-PFHxA	109%	20-150%
	13C4-PFHpA	113%	20-150%
	13C8-PFOA	111%	20-150%
	13C9-PFNA	107%	20-150%
	13C6-PFDA	114%	20-150%
	13C7-PFUnDA	112%	20-150%
	13C2-PFDoDA	101%	20-150%
	13C2-PFTeDA	97%	20-150%
	13C3-PFBS	104%	20-150%
	13C3-PFHxS	112%	20-150%
	13C8-PFOS	102%	20-150%
	13C8-FOSA	81%	20-150%
	d3-MeFOSA	81%	20-150%
	d5-EtFOSA	83%	20-150%
	d3-MeFOSAA	95%	20-150%
	d5-EtFOSAA	94%	20-150%
	d7-MeFOSE	75%	20-150%
	d9-EtFOSE	100%	20-150%
	13C2-4:2FTS	108%	20-180%
	13C2-6:2FTS	100%	20-180%
	13C2-8:2FTS	104%	20-180%
	13C3-HFPO-DA	120%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-B5	4Q55106.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.104	104	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0503	101	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0247	99	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0254	102	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0247	99	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0245	98	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0244	98	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0255	102	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0265	106	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0267	107	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0258	103	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0230	104	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0232	99	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0235	103	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0231	97	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0212	91	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0251	104	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0232	96	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0230	95	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0985	105	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0971	102	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0977	102	40-150
754-91-6	PFOSA	0.025	0.0253	101	40-150
31506-32-8	MeFOSA	0.05	0.0457	91	40-150
4151-50-2	EtFOSA	0.05	0.0469	94	40-150
2355-31-9	MeFOSAA	0.025	0.0253	101	40-150
2991-50-6	EtFOSAA	0.025	0.0267	107	40-150
24448-09-7	MeFOSE	0.125	0.121	97	40-150
1691-99-2	EtFOSE	0.125	0.116	93	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0500	100	40-150
919005-14-4	ADONA	0.0473	0.0479	101	40-150
377-73-1	PFMPA	0.05	0.0479	96	40-150
863090-89-5	PFMBA	0.05	0.0468	94	40-150
151772-58-6	NFDHA	0.05	0.0538	108	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0461	99	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0429	91	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-BS	4Q55106.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0454	102	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.111	89	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.575	92	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.604	97	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	82%	20-150%
	13C5-PFPeA	118%	20-150%
	13C5-PFHxA	113%	20-150%
	13C4-PFHpA	114%	20-150%
	13C8-PFOA	115%	20-150%
	13C9-PFNA	117%	20-150%
	13C6-PFDA	117%	20-150%
	13C7-PFUnDA	115%	20-150%
	13C2-PFDoDA	103%	20-150%
	13C2-PFTeDA	103%	20-150%
	13C3-PFBS	114%	20-150%
	13C3-PFHxS	121%	20-150%
	13C8-PFOS	111%	20-150%
	13C8-FOSA	78%	20-150%
	d3-MeFOSA	80%	20-150%
	d5-EtFOSA	83%	20-150%
	d3-MeFOSAA	99%	20-150%
	d5-EtFOSAA	94%	20-150%
	d7-MeFOSE	65%	20-150%
	d9-EtFOSE	86%	20-150%
	13C2-4:2FTS	100%	20-180%
	13C2-6:2FTS	104%	20-180%
	13C2-8:2FTS	101%	20-180%
	13C3-HFPO-DA	120%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-MS	4Q55112.D	1	12/15/23	AL	12/14/23	OP635	S4Q809
FC11894-2	4Q55111.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

CAS No.	Compound	FC11894-2 ug/l	Spike Q	MS ug/l	MS %	Limits	
375-22-4	Perfluorobutanoic acid	0.014 U		0.0909	0.0878	97	40-150
2706-90-3	Perfluoropentanoic acid	0.0027 J		0.0455	0.0444	92	40-150
307-24-4	Perfluorohexanoic acid	0.0026 J		0.0227	0.0234	92	40-150
375-85-9	Perfluoroheptanoic acid	0.0017 J		0.0227	0.0227	92	40-150
335-67-1	Perfluorooctanoic acid	0.0036 U		0.0227	0.0201	88	40-150
375-95-1	Perfluorononanoic acid	0.0036 U		0.0227	0.0200	88	40-150
335-76-2	Perfluorodecanoic acid	0.0036 U		0.0227	0.0201	88	40-150
2058-94-8	Perfluoroundecanoic acid	0.0036 U		0.0227	0.0220	97	40-150
307-55-1	Perfluorododecanoic acid	0.0036 U		0.0227	0.0216	95	40-150
72629-94-8	Perfluorotridecanoic acid	0.0036 U		0.0227	0.0214	94	40-150
376-06-7	Perfluorotetradecanoic acid	0.0036 U		0.0227	0.0213	94	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0036 U		0.0202	0.0207	103	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0045 U		0.0214	0.0199	93	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0036 U		0.0208	0.0179	86	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0036 U		0.0217	0.0186	86	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0036 U		0.0211	0.0194	92	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0036 U		0.0219	0.0211	97	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0036 U		0.0219	0.0199	91	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0045 U		0.022	0.0188	85	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.018 U		0.0852	0.0676	79	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0043 J		0.0864	0.0842	93	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U		0.0873	0.0847	97	40-150
754-91-6	PFOSA	0.0036 U		0.0227	0.0208	92	40-150
31506-32-8	MeFOSA	0.0071 U		0.0455	0.0364	80	40-150
4151-50-2	EtFOSA	0.0071 U		0.0455	0.0411	90	40-150
2355-31-9	MeFOSAA	0.0045 U		0.0227	0.0207	91	40-150
2991-50-6	EtFOSAA	0.0045 U		0.0227	0.0236	104	40-150
24448-09-7	MeFOSE	0.036 U		0.114	0.0990	87	40-150
1691-99-2	EtFOSE	0.036 U		0.114	0.100	88	40-150
13252-13-6	HFPO-DA (GenX)	0.0036 U		0.0455	0.0428	94	40-150
919005-14-4	ADONA	0.0071 U		0.043	0.0403	94	40-150
377-73-1	PFMPA	0.0071 U		0.0455	0.0437	96	40-150
863090-89-5	PFMBA	0.0071 U		0.0455	0.0420	92	40-150
151772-58-6	NFDHA	0.0071 U		0.0455	0.0459	101	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0071 U		0.0425	0.0376	88	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0071 U		0.043	0.0370	86	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-MS	4Q55112.D	1	12/15/23	AL	12/14/23	OP635	S4Q809
FC11894-2	4Q55111.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

CAS No.	Compound	FC11894-2 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0071 U	0.0405	0.0382	94	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.018 U	0.114	0.0915	81	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.089 U	0.568	0.524	92	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.089 U	0.568	0.527	93	40-150

CAS No.	ID Standard Recoveries	MS	FC11894-2	Limits
	13C4-PFBA	119%	89%	20-150%
	13C5-PFPeA	122%	92%	20-150%
	13C5-PFHxA	121%	88%	20-150%
	13C4-PFHpA	126%	92%	20-150%
	13C8-PFOA	121%	90%	20-150%
	13C9-PFNA	126%	90%	20-150%
	13C6-PFDA	125%	91%	20-150%
	13C7-PFUnDA	122%	90%	20-150%
	13C2-PFDoDA	117%	81%	20-150%
	13C2-PFTeDA	113%	78%	20-150%
	13C3-PFBS	135%	94%	20-150%
	13C3-PFHxS	135%	94%	20-150%
	13C8-PFOS	118%	83%	20-150%
	13C8-FOSA	96%	69%	20-150%
	d3-MeFOSA	96%	54%	20-150%
	d5-EtFOSA	101%	58%	20-150%
	d3-MeFOSAA	111%	79%	20-150%
	d5-EtFOSAA	113%	84%	20-150%
	d7-MeFOSE	80%	55%	20-150%
	d9-EtFOSE	103%	69%	20-150%
	13C2-4:2FTS	133%	93%	20-180%
	13C2-6:2FTS	113%	78%	20-180%
	13C2-8:2FTS	113%	77%	20-180%
	13C3-HFPO-DA	128%	94%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-DUP	4Q55115.D	1	12/15/23	AL	12/14/23	OP635	S4Q809
FC11894-3	4Q55114.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

CAS No.	Compound	FC11894-3 ug/l	DUP Q	ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.015 U	ND		nc		30
2706-90-3	Perfluoropentanoic acid	0.0077 U	ND		nc		30
307-24-4	Perfluorohexanoic acid	0.0038 U	ND		nc		30
375-85-9	Perfluoroheptanoic acid	0.0038 U	ND		nc		30
335-67-1	Perfluorooctanoic acid	0.0038 U	ND		nc		30
375-95-1	Perfluorononanoic acid	0.0038 U	ND		nc		30
335-76-2	Perfluorodecanoic acid	0.0038 U	ND		nc		30
2058-94-8	Perfluoroundecanoic acid	0.0038 U	ND		nc		30
307-55-1	Perfluorododecanoic acid	0.0038 U	ND		nc		30
72629-94-8	Perfluorotridecanoic acid	0.0038 U	ND		nc		30
376-06-7	Perfluorotetradecanoic acid	0.0038 U	ND		nc		30
375-73-5	Perfluorobutanesulfonic acid	0.0038 U	ND		nc		30
2706-91-4	Perfluoropentanesulfonic acid	0.0048 U	ND		nc		30
355-46-4	Perfluorohexanesulfonic acid	0.0038 U	ND		nc		30
375-92-8	Perfluoroheptanesulfonic acid	0.0038 U	ND		nc		30
1763-23-1	Perfluorooctanesulfonic acid	0.0038 U	ND		nc		30
68259-12-1	Perfluorononanesulfonic acid	0.0038 U	ND		nc		30
335-77-3	Perfluorodecanesulfonic acid	0.0038 U	ND		nc		30
79780-39-5	Perfluorododecanesulfonic aci	0.0048 U	ND		nc		30
757124-72-44:2	Fluorotelomer sulfonate	0.019 U	ND		nc		30
27619-97-2	6:2 Fluorotelomer sulfonate	0.019 U	ND		nc		30
39108-34-4	8:2 Fluorotelomer sulfonate	0.019 U	ND		nc		30
754-91-6	PFOSA	0.0038 U	ND		nc		30
31506-32-8	MeFOSA	0.0077 U	ND		nc		30
4151-50-2	EtFOSA	0.0077 U	ND		nc		30
2355-31-9	MeFOSAA	0.0048 U	ND		nc		30
2991-50-6	EtFOSAA	0.0048 U	ND		nc		30
24448-09-7	MeFOSE	0.038 U	ND		nc		30
1691-99-2	EtFOSE	0.038 U	ND		nc		30
13252-13-6	HFPO-DA (GenX)	0.0038 U	ND		nc		30
919005-14-4	ADONA	0.0077 U	ND		nc		30
377-73-1	PFMPA	0.0077 U	ND		nc		30
863090-89-5	PFMBA	0.0077 U	ND		nc		30
151772-58-6	NFDHA	0.0077 U	ND		nc		30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0077 U	ND		nc		30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0077 U	ND		nc		30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC11894
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP635-DUP	4Q55115.D	1	12/15/23	AL	12/14/23	OP635	S4Q809
FC11894-3	4Q55114.D	1	12/15/23	AL	12/14/23	OP635	S4Q809

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC11894-1, FC11894-2, FC11894-3, FC11894-4

CAS No.	Compound	FC11894-3 ug/l	DUP Q	ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0077	U	ND		nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.019	U	ND		nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.096	U	ND		nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.096	U	ND		nc	30

CAS No.	ID Standard Recoveries	DUP	FC11894-3	Limits
	13C4-PFBA	82%	95%	20-150%
	13C5-PFPeA	93%	113%	20-150%
	13C5-PFHxA	92%	111%	20-150%
	13C4-PFHpA	98%	115%	20-150%
	13C8-PFOA	94%	109%	20-150%
	13C9-PFNA	97%	109%	20-150%
	13C6-PFDA	92%	109%	20-150%
	13C7-PFUnDA	93%	105%	20-150%
	13C2-PFDoDA	80%	97%	20-150%
	13C2-PFTeDA	73%	83%	20-150%
	13C3-PFBS	96%	114%	20-150%
	13C3-PFHxS	100%	124%	20-150%
	13C8-PFOS	88%	97%	20-150%
	13C8-FOSA	91%	86%	20-150%
	d3-MeFOSA	71%	84%	20-150%
	d5-EtFOSA	79%	89%	20-150%
	d3-MeFOSAA	87%	97%	20-150%
	d5-EtFOSAA	94%	99%	20-150%
	d7-MeFOSE	70%	65%	20-150%
	d9-EtFOSE	84%	86%	20-150%
	13C2-4:2FTS	88%	103%	20-180%
	13C2-6:2FTS	81%	96%	20-180%
	13C2-8:2FTS	84%	90%	20-180%
	13C3-HFPO-DA	95%	111%	20-150%

* = Outside of Control Limits.