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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC9604

Sampling Date: 09/12/23

Report to:

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Total number of pages in report: 55



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.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Summary of Hits	5
Section 4: Sample Results	6
4.1: FC9604-1: AF-RHP01-WGN01LF-2309	7
4.2: FC9604-2: AF-RHP01-EB01LF-2309	10
4.3: FC9604-3: AF-RHP01-EB02LF-2309	13
4.4: FC9604-4: AF-RHMW01R-WGN01LF-2309	16
4.5: FC9604-5: AF-RHMW01R-EB01LF-2309	19
4.6: FC9604-6: AF-RHMW01R-EB02LF-2309	22
4.7: FC9604-7: AF-RHMW01R-EB03LF-2309	25
Section 5: Misc. Forms	28
5.1: Chain of Custody	29
5.2: QC Evaluation: DOD QSM5.x Limits	32
Section 6: MS Semi-volatiles - QC Data Summaries	33
6.1: Method Blank Summary	34
6.2: Blank Spike Summary	44
6.3: Matrix Spike Summary	52
6.4: Duplicate Summary	54

1

2

3

4

5

6



Sample Summary

AECOM, INC.

Job No: FC9604

**N6274223F0104 RH Fire Suppression System
Project No: 60697810**

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC9604-1	09/12/23	14:30	AYMD09/14/23	AQ	Ground Water	AF-RHP01-WGN01LF-2309
FC9604-2	09/12/23	10:15	AYMD09/14/23	AQ	Equipment Blank	AF-RHP01-EB01LF-2309
FC9604-3	09/12/23	10:30	AYMD09/14/23	AQ	Equipment Blank	AF-RHP01-EB02LF-2309
FC9604-4	09/12/23	14:15	JVCW 09/14/23	AQ	Ground Water	AF-RHMW01R-WGN01LF-2309
FC9604-5	09/12/23	11:45	JVCW 09/14/23	AQ	Equipment Blank	AF-RHMW01R-EB01LF-2309
FC9604-6	09/12/23	11:50	JVCW 09/14/23	AQ	Equipment Blank	AF-RHMW01R-EB02LF-2309
FC9604-7	09/12/23	16:20	JVCW 09/14/23	AQ	Equipment Blank	AF-RHMW01R-EB03LF-2309

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC.

Job No: FC9604

Site: N6274223F0104 RH Fire Suppression System

Report Date: 9/27/2023 9:17:17 AM

On 09/14/2023, 2 Samples and 5 Equipment Blanks were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC9604 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: OP99077

Sample(s) FC9640-1MS, FC9640-2DUP were used as the QC samples indicated.

Matrix: AQ

Batch ID: OP99174

OP99174-BS: Insufficient sample for MS/MSD.

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: FC9604
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 09/12/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FC9604-1 AF-RHP01-WGN01LF-2309

Perfluorobutanoic acid	13.7 J	15	3.8	ng/l	EPA DRAFT 1633
Perfluoropentanoic acid	9.5	7.5	1.9	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid	4.4	3.8	1.9	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid	3.9	3.8	1.9	ng/l	EPA DRAFT 1633
Perfluorooctanoic acid	3.9	3.8	0.94	ng/l	EPA DRAFT 1633
Perfluorononanoic acid	1.1 J	3.8	1.9	ng/l	EPA DRAFT 1633
Perfluorobutanesulfonic acid	1.7 J	3.8	1.9	ng/l	EPA DRAFT 1633
Perfluorohexanesulfonic acid	4.9	3.8	1.9	ng/l	EPA DRAFT 1633
Perfluorooctanesulfonic acid	13.2	3.8	1.9	ng/l	EPA DRAFT 1633

FC9604-2 AF-RHP01-EB01LF-2309

No hits reported in this sample.

FC9604-3 AF-RHP01-EB02LF-2309

No hits reported in this sample.

FC9604-4 AF-RHMW01R-WGN01LF-2309

Perfluoropentanoic acid	2.4 J	7.4	1.9	ng/l	EPA DRAFT 1633
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FC9604-5 AF-RHMW01R-EB01LF-2309

No hits reported in this sample.

FC9604-6 AF-RHMW01R-EB02LF-2309

No hits reported in this sample.

FC9604-7 AF-RHMW01R-EB03LF-2309

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-RHP01-WGN01LF-2309		
Lab Sample ID:	FC9604-1	Date Sampled:	09/12/23
Matrix:	AQ - Ground Water	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q24827.D	1	09/22/23 00:25	MV	09/19/23 10:30	OP99077	S6Q355
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	13.7	15	3.8	1.8	ng/l	J
2706-90-3	Perfluoropentanoic acid	9.5	7.5	1.9	0.89	ng/l	
307-24-4	Perfluorohexanoic acid	4.4	3.8	1.9	0.47	ng/l	
375-85-9	Perfluoroheptanoic acid	3.9	3.8	1.9	0.47	ng/l	
335-67-1	Perfluorooctanoic acid	3.9	3.8	0.94	0.47	ng/l	
375-95-1	Perfluorononanoic acid	1.1	3.8	1.9	0.58	ng/l	J
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	1.7	3.8	1.9	0.47	ng/l	J
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.7	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	4.9	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	13.2	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

4.1
4

Report of Analysis

Client Sample ID:	AF-RHP01-WGN01LF-2309		
Lab Sample ID:	FC9604-1	Date Sampled:	09/12/23
Matrix:	AQ - Ground Water	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.8 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	98%		20-150%
	13C5-PFPeA	103%		20-150%
	13C5-PFHxA	106%		20-150%
	13C4-PFHpA	104%		20-150%
	13C8-PFOA	106%		20-150%
	13C9-PFNA	103%		20-150%
	13C6-PFDA	104%		20-150%
	13C7-PFUnDA	102%		20-150%
	13C2-PFDoDA	85%		20-150%
	13C2-PFTeDA	80%		20-150%
	13C3-PFBS	101%		20-150%
	13C3-PFHxS	101%		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-RHP01-WGN01LF-2309	
Lab Sample ID:	FC9604-1	Date Sampled: 09/12/23
Matrix:	AQ - Ground Water	Date Received: 09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	96%		20-150%
	13C8-FOSA	77%		20-150%
	d3-MeFOSA	75%		20-150%
	d5-EtFOSA	86%		20-150%
	d3-MeFOSAA	87%		20-150%
	d5-EtFOSAA	82%		20-150%
	d7-MeFOSE	76%		20-150%
	d9-EtFOSE	80%		20-150%
	13C2-4:2FTS	99%		20-180%
	13C2-6:2FTS	103%		20-180%
	13C2-8:2FTS	97%		20-180%
	13C3-HFPO-DA	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-RHP01-EB01LF-2309		
Lab Sample ID:	FC9604-2	Date Sampled:	09/12/23
Matrix:	AQ - Equipment Blank	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q25053.D	1	09/25/23 22:50	MV	09/25/23 09:45	OP99174	S6Q357
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

4.2
4

Report of Analysis

Client Sample ID:	AF-RHP01-EB01LF-2309		Date Sampled:	09/12/23
Lab Sample ID:	FC9604-2		Date Received:	09/14/23
Matrix:	AQ - Equipment Blank		Percent Solids:	n/a
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
Project:	N6274223F0104 RH Fire Suppression System			

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

2355-31-9	MeFOSAA	3.8 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	101%		20-150%
	13C5-PFPeA	104%		20-150%
	13C5-PFHxA	106%		20-150%
	13C4-PFHpA	104%		20-150%
	13C8-PFOA	96%		20-150%
	13C9-PFNA	91%		20-150%
	13C6-PFDA	106%		20-150%
	13C7-PFUnDA	100%		20-150%
	13C2-PFDoDA	84%		20-150%
	13C2-PFTeDA	79%		20-150%
	13C3-PFBS	104%		20-150%
	13C3-PFHxS	100%		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-RHP01-EB01LF-2309		Date Sampled:	09/12/23
Lab Sample ID:	FC9604-2		Date Received:	09/14/23
Matrix:	AQ - Equipment Blank		Percent Solids:	n/a
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
Project:	N6274223F0104 RH Fire Suppression System			

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	103%		20-150%
	13C8-FOSA	84%		20-150%
	d3-MeFOSA	81%		20-150%
	d5-EtFOSA	84%		20-150%
	d3-MeFOSAA	96%		20-150%
	d5-EtFOSAA	87%		20-150%
	d7-MeFOSE	82%		20-150%
	d9-EtFOSE	80%		20-150%
	13C2-4:2FTS	119%		20-180%
	13C2-6:2FTS	106%		20-180%
	13C2-8:2FTS	109%		20-180%
	13C3-HFPO-DA	93%		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-RHP01-EB02LF-2309	
Lab Sample ID:	FC9604-3	Date Sampled: 09/12/23
Matrix:	AQ - Equipment Blank	Date Received: 09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q25054.D	1	09/25/23 23:04	MV	09/25/23 09:45	OP99174	S6Q357
Run #2							

Run #	Initial Volume	Final Volume
Run #1	490 ml	5.0 ml
Run #2		

CAS No. Compound Result LOQ LOD DL Units Q

PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	4.1 U	16	4.1	1.9	ng/l
2706-90-3	Perfluoropentanoic acid	2.0 U	8.2	2.0	0.96	ng/l
307-24-4	Perfluorohexanoic acid	2.0 U	4.1	2.0	0.51	ng/l
375-85-9	Perfluoroheptanoic acid	2.0 U	4.1	2.0	0.51	ng/l
335-67-1	Perfluorooctanoic acid	1.0 U	4.1	1.0	0.51	ng/l
375-95-1	Perfluorononanoic acid	2.0 U	4.1	2.0	0.62	ng/l
335-76-2	Perfluorodecanoic acid	2.0 U	4.1	2.0	0.51	ng/l
2058-94-8	Perfluoroundecanoic acid	2.0 U	4.1	2.0	0.61	ng/l
307-55-1	Perfluorododecanoic acid	2.0 U	4.1	2.0	0.61	ng/l
72629-94-8	Perfluorotridecanoic acid	2.0 U	4.1	2.0	0.86	ng/l
376-06-7	Perfluorotetradecanoic acid	2.0 U	4.1	2.0	0.51	ng/l

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	2.0 U	4.1	2.0	0.51	ng/l
2706-91-4	Perfluoropentanesulfonic acid	4.1 U	5.1	4.1	1.1	ng/l
355-46-4	Perfluorohexanesulfonic acid	2.0 U	4.1	2.0	0.71	ng/l
375-92-8	Perfluoroheptanesulfonic acid	2.0 U	4.1	2.0	0.51	ng/l
1763-23-1	Perfluorooctanesulfonic acid	2.0 U	4.1	2.0	0.55	ng/l
68259-12-1	Perfluorononanesulfonic acid	2.0 U	4.1	2.0	0.58	ng/l
335-77-3	Perfluorodecanesulfonic acid	2.0 U	4.1	2.0	0.65	ng/l
79780-39-5	Perfluorododecanesulfonic aci	4.1 U	5.1	4.1	1.2	ng/l

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	8.2 U	20	8.2	3.3	ng/l
27619-97-2	6:2 Fluorotelomer sulfonate	8.2 U	20	8.2	3.5	ng/l
39108-34-4	8:2 Fluorotelomer sulfonate	8.2 U	20	8.2	4.2	ng/l

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	2.0 U	4.1	2.0	0.68	ng/l
31506-32-8	MeFOSA	4.1 U	8.2	4.1	1.0	ng/l
4151-50-2	EtFOSA	4.1 U	8.2	4.1	1.0	ng/l

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

4.3
4

Report of Analysis

Client Sample ID:	AF-RHP01-EB02LF-2309		Date Sampled:	09/12/23
Lab Sample ID:	FC9604-3		Date Received:	09/14/23
Matrix:	AQ - Equipment Blank		Percent Solids:	n/a
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
Project:	N6274223F0104 RH Fire Suppression System			

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

2355-31-9	MeFOSAA	4.1 U	5.1	4.1	1.0	ng/l	
2991-50-6	EtFOSAA	4.1 U	5.1	4.1	1.4	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	20 U	41	20	4.5	ng/l	
1691-99-2	EtFOSE	20 U	41	20	7.6	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	2.0 U	4.1	2.0	1.0	ng/l	
919005-14-4	ADONA	4.1 U	8.2	4.1	1.9	ng/l	
377-73-1	PFMPA	2.0 U	8.2	2.0	1.0	ng/l	
863090-89-5	PFMBA	4.1 U	8.2	4.1	1.2	ng/l	
151772-58-6	NFDHA	4.1 U	8.2	4.1	1.2	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	4.1 U	8.2	4.1	1.4	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	4.1 U	8.2	4.1	1.8	ng/l	
113507-82-7	PFEESA	2.0 U	8.2	2.0	0.80	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	10 U	20	10	4.6	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	20 U	100	20	8.9	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	20 U	100	20	8.0	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	95%		20-150%
	13C5-PFPeA	101%		20-150%
	13C5-PFHxA	102%		20-150%
	13C4-PFHpA	101%		20-150%
	13C8-PFOA	98%		20-150%
	13C9-PFNA	95%		20-150%
	13C6-PFDA	102%		20-150%
	13C7-PFUnDA	97%		20-150%
	13C2-PFDoDA	88%		20-150%
	13C2-PFTeDA	77%		20-150%
	13C3-PFBS	99%		20-150%
	13C3-PFHxS	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-RHP01-EB02LF-2309		Date Sampled:	09/12/23
Lab Sample ID:	FC9604-3		Date Received:	09/14/23
Matrix:	AQ - Equipment Blank		Percent Solids:	n/a
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
Project:	N6274223F0104 RH Fire Suppression System			

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	104%		20-150%
	13C8-FOSA	84%		20-150%
	d3-MeFOSA	88%		20-150%
	d5-EtFOSA	92%		20-150%
	d3-MeFOSAA	103%		20-150%
	d5-EtFOSAA	101%		20-150%
	d7-MeFOSE	84%		20-150%
	d9-EtFOSE	84%		20-150%
	13C2-4:2FTS	109%		20-180%
	13C2-6:2FTS	102%		20-180%
	13C2-8:2FTS	106%		20-180%
	13C3-HFPO-DA	93%		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-RHMW01R-WGN01LF-2309		
Lab Sample ID:	FC9604-4	Date Sampled:	09/12/23
Matrix:	AQ - Ground Water	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q24830.D	1	09/22/23 01:08	MV	09/19/23 10:30	OP99077	S6Q355
Run #2							

Run #	Initial Volume	Final Volume
Run #1	540 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	3.7 U	15	3.7	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	2.4	7.4	1.9	0.87	ng/l	J
307-24-4	Perfluorohexanoic acid	1.9 U	3.7	1.9	0.46	ng/l	
375-85-9	Perfluoroheptanoic acid	1.9 U	3.7	1.9	0.46	ng/l	
335-67-1	Perfluorooctanoic acid	0.93 U	3.7	0.93	0.46	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
335-76-2	Perfluorodecanoic acid	1.9 U	3.7	1.9	0.46	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	3.7	1.9	0.78	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.9 U	3.7	1.9	0.46	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.9 U	3.7	1.9	0.46	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.7 U	4.6	3.7	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	3.7	1.9	0.65	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.9 U	3.7	1.9	0.46	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	3.7	1.9	0.50	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	3.7	1.9	0.53	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	3.7	1.9	0.59	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.7 U	4.6	3.7	1.1	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.4 U	19	7.4	3.8	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	3.7	1.9	0.62	ng/l	
31506-32-8	MeFOSA	3.7 U	7.4	3.7	0.93	ng/l	
4151-50-2	EtFOSA	3.7 U	7.4	3.7	0.93	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-RHMW01R-WGN01LF-2309		
Lab Sample ID:	FC9604-4	Date Sampled:	09/12/23
Matrix:	AQ - Ground Water	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.7 U	4.6	3.7	0.93	ng/l	
2991-50-6	EtFOSAA	3.7 U	4.6	3.7	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	19 U	37	19	4.1	ng/l	
1691-99-2	EtFOSE	19 U	37	19	6.9	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

13252-13-6	HFPO-DA (GenX)	1.9 U	3.7	1.9	0.93	ng/l	
919005-14-4	ADONA	3.7 U	7.4	3.7	1.7	ng/l	
377-73-1	PFMPA	1.9 U	7.4	1.9	0.93	ng/l	
863090-89-5	PFMBA	3.7 U	7.4	3.7	1.1	ng/l	
151772-58-6	NFDHA	3.7 U	7.4	3.7	1.1	ng/l	

PER and POLYFLUOROETHER SULFONIC ACIDS

756426-58-1	9Cl-PF3ONS (F-53B Major)	3.7 U	7.4	3.7	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.7 U	7.4	3.7	1.6	ng/l	
113507-82-7	PFEESA	1.9 U	7.4	1.9	0.72	ng/l	

FLUOROTELOMER CARBOXYLIC ACIDS

356-02-5	3:3 Fluorotelomer carboxylate	9.3 U	19	9.3	4.2	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	93	19	8.1	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	93	19	7.3	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	103%		20-150%
	13C5-PFPeA	105%		20-150%
	13C5-PFHxA	110%		20-150%
	13C4-PFHpA	106%		20-150%
	13C8-PFOA	98%		20-150%
	13C9-PFNA	99%		20-150%
	13C6-PFDA	94%		20-150%
	13C7-PFUnDA	98%		20-150%
	13C2-PFDoDA	79%		20-150%
	13C2-PFTeDA	72%		20-150%
	13C3-PFBS	106%		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-RHMW01R-WGN01LF-2309	
Lab Sample ID:	FC9604-4	Date Sampled: 09/12/23
Matrix:	AQ - Ground Water	Date Received: 09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	95%		20-150%
	13C8-FOSA	84%		20-150%
	d3-MeFOSA	74%		20-150%
	d5-EtFOSA	74%		20-150%
	d3-MeFOSAA	89%		20-150%
	d5-EtFOSAA	83%		20-150%
	d7-MeFOSE	75%		20-150%
	d9-EtFOSE	79%		20-150%
	13C2-4:2FTS	99%		20-180%
	13C2-6:2FTS	108%		20-180%
	13C2-8:2FTS	107%		20-180%
	13C3-HFPO-DA	105%		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-RHMW01R-EB01LF-2309		
Lab Sample ID:	FC9604-5	Date Sampled:	09/12/23
Matrix:	AQ - Equipment Blank	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q24831.D	1	09/22/23 01:22	MV	09/19/23 10:30	OP99077	S6Q355
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

4.5
4

Report of Analysis

Client Sample ID:	AF-RHMW01R-EB01LF-2309	
Lab Sample ID:	FC9604-5	Date Sampled: 09/12/23
Matrix:	AQ - Equipment Blank	Date Received: 09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

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

2355-31-9	MeFOSAA	3.8 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	98%		20-150%
	13C5-PFHxA	96%		20-150%
	13C4-PFHpA	102%		20-150%
	13C8-PFOA	99%		20-150%
	13C9-PFNA	99%		20-150%
	13C6-PFDA	99%		20-150%
	13C7-PFUnDA	112%		20-150%
	13C2-PFDoDA	106%		20-150%
	13C2-PFTeDA	83%		20-150%
	13C3-PFBS	105%		20-150%
	13C3-PFHxS	102%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW01R-EB01LF-2309		
Lab Sample ID:	FC9604-5	Date Sampled:	09/12/23
Matrix:	AQ - Equipment Blank	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	93%		20-150%
	13C8-FOSA	76%		20-150%
	d3-MeFOSA	76%		20-150%
	d5-EtFOSA	86%		20-150%
	d3-MeFOSAA	93%		20-150%
	d5-EtFOSAA	92%		20-150%
	d7-MeFOSE	76%		20-150%
	d9-EtFOSE	80%		20-150%
	13C2-4:2FTS	112%		20-180%
	13C2-6:2FTS	116%		20-180%
	13C2-8:2FTS	103%		20-180%
	13C3-HFPO-DA	95%		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-RHMW01R-EB02LF-2309		
Lab Sample ID:	FC9604-6	Date Sampled:	09/12/23
Matrix:	AQ - Equipment Blank	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q25055.D	1	09/25/23 23:19	MV	09/25/23 09:45	OP99174	S6Q357
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

4.6
4

Report of Analysis

Client Sample ID:	AF-RHMW01R-EB02LF-2309		
Lab Sample ID:	FC9604-6	Date Sampled:	09/12/23
Matrix:	AQ - Equipment Blank	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.8 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	87%		20-150%
	13C5-PFPeA	91%		20-150%
	13C5-PFHxA	89%		20-150%
	13C4-PFHpA	90%		20-150%
	13C8-PFOA	83%		20-150%
	13C9-PFNA	93%		20-150%
	13C6-PFDA	92%		20-150%
	13C7-PFUnDA	84%		20-150%
	13C2-PFDoDA	80%		20-150%
	13C2-PFTeDA	67%		20-150%
	13C3-PFBS	89%		20-150%
	13C3-PFHxS	86%		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-RHMW01R-EB02LF-2309	
Lab Sample ID:	FC9604-6	Date Sampled: 09/12/23
Matrix:	AQ - Equipment Blank	Date Received: 09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	86%		20-150%
	13C8-FOSA	72%		20-150%
	d3-MeFOSA	70%		20-150%
	d5-EtFOSA	70%		20-150%
	d3-MeFOSAA	87%		20-150%
	d5-EtFOSAA	81%		20-150%
	d7-MeFOSE	70%		20-150%
	d9-EtFOSE	68%		20-150%
	13C2-4:2FTS	91%		20-180%
	13C2-6:2FTS	90%		20-180%
	13C2-8:2FTS	90%		20-180%
	13C3-HFPO-DA	83%		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-RHMW01R-EB03LF-2309		
Lab Sample ID:	FC9604-7	Date Sampled:	09/12/23
Matrix:	AQ - Equipment Blank	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q24833.D	1	09/22/23 01:51	MV	09/19/23 10:30	OP99077	S6Q355
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-RHMW01R-EB03LF-2309		
Lab Sample ID:	FC9604-7	Date Sampled:	09/12/23
Matrix:	AQ - Equipment Blank	Date Received:	09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.8 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	103%		20-150%
	13C5-PFPeA	110%		20-150%
	13C5-PFHxA	104%		20-150%
	13C4-PFHpA	106%		20-150%
	13C8-PFOA	99%		20-150%
	13C9-PFNA	95%		20-150%
	13C6-PFDA	97%		20-150%
	13C7-PFUnDA	105%		20-150%
	13C2-PFDoDA	98%		20-150%
	13C2-PFTeDA	80%		20-150%
	13C3-PFBS	96%		20-150%
	13C3-PFHxS	101%		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-RHMW01R-EB03LF-2309	
Lab Sample ID:	FC9604-7	Date Sampled: 09/12/23
Matrix:	AQ - Equipment Blank	Date Received: 09/14/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	119%		20-150%
	13C8-FOSA	89%		20-150%
	d3-MeFOSA	87%		20-150%
	d5-EtFOSA	96%		20-150%
	d3-MeFOSAA	110%		20-150%
	d5-EtFOSAA	97%		20-150%
	d7-MeFOSE	90%		20-150%
	d9-EtFOSE	96%		20-150%
	13C2-4:2FTS	106%		20-180%
	13C2-6:2FTS	108%		20-180%
	13C2-8:2FTS	103%		20-180%
	13C3-HFPO-DA	102%		20-150%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5.x Limits



Client / Reporting Information			Project Information			SGS - ORLANDO Quote #		SKIFF #																																					
Company Name: AECOM			Project Name: N6274223F0104 RH Fire Suppression System			PFAS EPA Draft 1633		<table border="1"> <thead> <tr> <th colspan="2">Analytical Information</th> <th>Matrix Codes</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>DW - Drinking Water</td> </tr> <tr> <td></td> <td></td> <td>GW - Ground Water</td> </tr> <tr> <td></td> <td></td> <td>WW - Water</td> </tr> <tr> <td></td> <td></td> <td>SW - Surface Water</td> </tr> <tr> <td></td> <td></td> <td>SO - Soil</td> </tr> <tr> <td></td> <td></td> <td>SL - Sludge</td> </tr> <tr> <td></td> <td></td> <td>OI - Oil</td> </tr> <tr> <td></td> <td></td> <td>LIQ - Other Liquid</td> </tr> <tr> <td></td> <td></td> <td>AIR - Air</td> </tr> <tr> <td></td> <td></td> <td>SOL - Other Solid</td> </tr> <tr> <td></td> <td></td> <td>WP - Wipe</td> </tr> </tbody> </table>		Analytical Information		Matrix Codes			DW - Drinking Water			GW - Ground Water			WW - Water			SW - Surface Water			SO - Soil			SL - Sludge			OI - Oil			LIQ - Other Liquid			AIR - Air			SOL - Other Solid			WP - Wipe
Analytical Information		Matrix Codes																																											
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		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 #																																										
Phone #: 303-796-4624 / 808-954-4512			Client Purchase Order # 151253																																										
Sampler(s) Name(s) (Printed) Sampler 1: Andy Young Sampler 2: Miranda DeBarne																																													
SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION			CONTAINER INFORMATION																																								
		DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	PCU	INH	HN03	HE04	NAOH-ZNAC	DI WATER	MECH																														
1	AF-RHP01-WGN01LF-2309	9/12/23	1430	AS, MD	GW	3		X								X																													
2	AF-RHP01-EB01LF-2309	↓	1015	AS, MD	GW	3		X								X																													
3	AF-RHP01-EB02LF-2309	↓	1050	AS, MD	GW	3		X								X																													
4																																													
5																																													
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 unred AFB: 016-22612903																																							
Rush T/A Data Available VIA Email or Lblink			Sample Custody must be documented below each time samples change possession, including courier delivery.																																										
Relinquished by/Sampler/Affiliation	Date Time: /SSD	Received By/Affiliation	Relinquished By/Affiliation	Date Time: /SSD	Received By/Affiliation	Relinquished By/Affiliation	Date Time: /SSD	Received By/Affiliation																																					
1 Andy Young/AECOM	9/12/23/SSD	2 Alex Edmunds/AECOM	3 Alex Edmunds/AECOM	9/12/23/SSD	4 UC	5 UC																																							
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation																																					
5 UC		6 SP	7 SP		8																																								

PFAS_COCS_ALL_09112023.xls Rev 031318



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
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FC9604

2309AFSG14

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		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">PFAS EPA Draft 1633</div> <div style="text-align: center;"> 09/12/23 </div> <div style="font-size: small;"> 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 </div> </div>												LAB USE ONLY	
Address: 1001 Bishop St. ste 1600		Street															
City: Honolulu State: HI Zip: 96813		City Honolulu State Hawaii															
Project Contact: Katie Abbott Email: katie.abbott@aecom.com Project Manager: Watson Tanji Email: watson.tanji@aecom.com		Project # 23F0104 - 60697810															
Phone #: 303-796-4624 / 808-954-4512		Fax #															
Sampler(s) Name(s) (Printed) Sampler 1: JV Sampler 2: CW		Client Purchase Order # 151253															
SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION			CONTAINER INFORMATION												PFAS EPA Draft 1633
		DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NacOH	PANCS	PSS04	NACOH-ZNAC	DI WATER	MECH		
4	AF-RHMW01R-WGN01LF-2309	9/12/23	1415	JV CW	GW	3		X									X
5	AF-RHMW01R-EB01LF-2309	9/12/23	1145	JV CW	GW	3		X									X
6	AF-RHMW01R-EB02LF-2309	9/12/23	1150	JV CW	GW	3		X									X
7	AF-RHMW01R-EB03LF-2309	9/12/23	1620	JV CW	GW	3		X									X
Turnaround Time (Business days)		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 Initial AWB: 016-22612903	
10 Day (Business) 7 Day <input checked="" type="checkbox"/> 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other				Rush T/A Data Available VIA Email or Lablink													
Relinquished by Sampler/Affiliation		Date Time:		Sample Custody must be documented below each time samples change possession, including courier delivery.												Received By/Affiliation	
1 Javelin V6/AECOM		9/12/23 702		2 Alex Edmond AECOM												3 Alex Edmond AECOM	
Relinquished by/Affiliation		Date Time:		6 JVC 09/14/23 045												7	
5 UC																8 UC	

PFAS_COCs_ALL_09112023.xls Rev 031318

FC9604: Chain of Custody

Page 2 of 3



5.1 5

SGS Sample Receipt Summary

Job Number: fc9604

Client: AECOM

Project: N6274223F0104 RH Fire Suppression Syst

Date / Time Received: 9/14/2023 8:45:00 AM

Delivery Method: United Cargo/Airspace

Airbill #'s: United Cargo AWB #: 016-22612903

Cooler Temps (Raw Measured) °C: Cooler 1: (5.0);

Cooler Temps (Corrected) °C: Cooler 1: (4.8);

Cooler Informatio

Y or N

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

Trip Blank Information

Y or N N/A

- 1. Trip Blank present / cooler:
- 2. Trip Blank listed on COC:

W or S N/A

- 3. Type of TB Received

Sample Information

Y or N N/A

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

Misc Information

Number of Encores: 25 Gram 5 Gram Number of Lab Filtered Metals

Test Strip Lot #s: pH 0-3: _____ pH 10-12: _____ Other: (Specify) _____

Residual Chlorine Test Strip Lot _____

Comments

SM001

Rev. Date 05/04/17

Technician: SHAYLAP

Date: 9/14/2023 08:45 AM

Reviewer: SP

Date: 09/14/2023

FC9604: Chain of Custody

Page 3 of 3

5.1
5

QC Evaluation: DOD QSM5.x Limits

Job Number: FC9604
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 09/12/23

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 FC9604

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: FC9604
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q355-IBLK	6Q24819.D	1	09/21/23	MV	n/a	n/a	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

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: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q355-IBLK	6Q24819.D	1	09/21/23	MV	n/a	n/a	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

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	101% 20-150%
	13C5-PFPeA	97% 20-150%
	13C5-PFHxA	95% 20-150%
	13C4-PFHpA	98% 20-150%
	13C8-PFOA	108% 20-150%
	13C9-PFNA	113% 20-150%
	13C6-PFDA	104% 20-150%
	13C7-PFUnDA	109% 20-150%
	13C2-PFDoDA	102% 20-150%
	13C2-PFTeDA	99% 20-150%
	13C3-PFBS	104% 20-150%
	13C3-PFHxS	103% 20-150%
	13C8-PFOS	110% 20-150%
	13C8-FOSA	103% 20-150%
	d3-MeFOSAA	103% 20-150%
	d5-EtFOSAA	98% 20-150%
	13C2-4:2FTS	106% 20-180%
	13C2-6:2FTS	113% 20-180%
	13C2-8:2FTS	107% 20-180%

6.1.1
6

Instrument Blank

Job Number: FC9604
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q357-IBLK	6Q25047.D	1	09/25/23	MV	n/a	n/a	S6Q357

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-2, FC9604-3, FC9604-6

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: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q357-IBLK	6Q25047.D	1	09/25/23	MV	n/a	n/a	S6Q357

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-2, FC9604-3, FC9604-6

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	103% 20-150%
	13C8-PFOA	98% 20-150%
	13C9-PFNA	97% 20-150%
	13C6-PFDA	104% 20-150%
	13C7-PFUnDA	106% 20-150%
	13C2-PFDoDA	98% 20-150%
	13C2-PFTeDA	94% 20-150%
	13C3-PFBS	100% 20-150%
	13C3-PFHxS	96% 20-150%
	13C8-PFOS	104% 20-150%
	13C8-FOSA	99% 20-150%
	d3-MeFOSA	96% 20-150%
	d5-EtFOSA	95% 20-150%
	d3-MeFOSAA	101% 20-150%
	d5-EtFOSAA	97% 20-150%
	d7-MeFOSE	90% 20-150%
	d9-EtFOSE	90% 20-150%
	13C2-4:2FTS	107% 20-180%
	13C2-6:2FTS	102% 20-180%
	13C2-8:2FTS	97% 20-180%
	13C3-HFPO-DA	95% 20-150%

Method Blank Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-MB	6Q24826.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

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: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-MB	6Q24826.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

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	112% 20-150%
	13C5-PFPeA	113% 20-150%
	13C5-PFHxA	118% 20-150%
	13C4-PFHpA	110% 20-150%
	13C8-PFOA	109% 20-150%
	13C9-PFNA	103% 20-150%
	13C6-PFDA	114% 20-150%
	13C7-PFUnDA	113% 20-150%
	13C2-PFDoDA	108% 20-150%
	13C2-PFTeDA	95% 20-150%
	13C3-PFBS	111% 20-150%
	13C3-PFHxS	111% 20-150%
	13C8-PFOS	119% 20-150%
	13C8-FOSA	70% 20-150%
	d3-MeFOSA	79% 20-150%
	d5-EtFOSA	88% 20-150%
	d3-MeFOSAA	118% 20-150%
	d5-EtFOSAA	111% 20-150%
	d7-MeFOSE	73% 20-150%
	d9-EtFOSE	85% 20-150%
	13C2-4:2FTS	120% 20-180%
	13C2-6:2FTS	125% 20-180%
	13C2-8:2FTS	117% 20-180%
	13C3-HFPO-DA	120% 20-150%

Method Blank Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99174-MB	6Q25052.D	1	09/25/23	MV	09/25/23	OP99174	S6Q357

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-2, FC9604-3, FC9604-6

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: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99174-MB	6Q25052.D	1	09/25/23	MV	09/25/23	OP99174	S6Q357

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-2, FC9604-3, FC9604-6

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	103% 20-150%
	13C5-PFHxA	103% 20-150%
	13C4-PFHpA	103% 20-150%
	13C8-PFOA	100% 20-150%
	13C9-PFNA	107% 20-150%
	13C6-PFDA	109% 20-150%
	13C7-PFUnDA	102% 20-150%
	13C2-PFDoDA	95% 20-150%
	13C2-PFTeDA	80% 20-150%
	13C3-PFBS	104% 20-150%
	13C3-PFHxS	102% 20-150%
	13C8-PFOS	108% 20-150%
	13C8-FOSA	78% 20-150%
	d3-MeFOSA	80% 20-150%
	d5-EtFOSA	88% 20-150%
	d3-MeFOSAA	96% 20-150%
	d5-EtFOSAA	105% 20-150%
	d7-MeFOSE	76% 20-150%
	d9-EtFOSE	83% 20-150%
	13C2-4:2FTS	113% 20-180%
	13C2-6:2FTS	105% 20-180%
	13C2-8:2FTS	101% 20-180%
	13C3-HFPO-DA	94% 20-150%

6.1.4
6

Continuing Calibration Blank

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q355-ICCB	6Q24835.D	1	09/22/23	MV	n/a	n/a	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP99077-DUP, OP99077-MS

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: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q355-ICCB	6Q24835.D	1	09/22/23	MV	n/a	n/a	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

OP99077-DUP, OP99077-MS

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	102% 20-150%
	13C5-PFPeA	100% 20-150%
	13C5-PFHxA	97% 20-150%
	13C4-PFHpA	106% 20-150%
	13C8-PFOA	98% 20-150%
	13C9-PFNA	102% 20-150%
	13C6-PFDA	108% 20-150%
	13C7-PFUnDA	111% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	105% 20-150%
	13C3-PFBS	101% 20-150%
	13C3-PFHxS	103% 20-150%
	13C8-PFOS	108% 20-150%
	13C8-FOSA	100% 20-150%
	d3-MeFOSAA	101% 20-150%
	d5-EtFOSAA	101% 20-150%
	13C2-4:2FTS	106% 20-180%
	13C2-6:2FTS	107% 20-180%
	13C2-8:2FTS	112% 20-180%

Blank Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-LLBS	6Q24825.D	1	09/21/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0312	104	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0156	104	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0074	99	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0081	108	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0083	111	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0074	99	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0084	112	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0079	105	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0072	96	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0073	97	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0075	100	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0071	107	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0071	101	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0065	95	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0077	108	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0076	109	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0079	109	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0072	99	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0070	96	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0308	110	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0299	105	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0280	97	40-150
754-91-6	PFOSA	0.0075	0.0081	108	40-150
31506-32-8	MeFOSA	0.015	0.0157	105	40-150
4151-50-2	EtFOSA	0.015	0.0151	101	40-150
2355-31-9	MeFOSAA	0.0075	0.0081	108	40-150
2991-50-6	EtFOSAA	0.0075	0.0086	115	40-150
24448-09-7	MeFOSE	0.0375	0.0379	101	40-150
1691-99-2	EtFOSE	0.0375	0.0384	102	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0155	103	40-150
919005-14-4	ADONA	0.0142	0.0157	111	40-150
377-73-1	PFMPA	0.015	0.0156	104	40-150
863090-89-5	PFMBA	0.015	0.0156	104	40-150
151772-58-6	NFDHA	0.015	0.0151	101	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.014	0.0146	104	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0142	0.0140	99	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-LLBS	6Q24825.D	1	09/21/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0140	105	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0289	77	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.181	97	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.196	105	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	112%	20-150%
	13C5-PFPeA	111%	20-150%
	13C5-PFHxA	112%	20-150%
	13C4-PFHpA	108%	20-150%
	13C8-PFOA	107%	20-150%
	13C9-PFNA	103%	20-150%
	13C6-PFDA	108%	20-150%
	13C7-PFUnDA	115%	20-150%
	13C2-PFDoDA	112%	20-150%
	13C2-PFTeDA	107%	20-150%
	13C3-PFBS	113%	20-150%
	13C3-PFHxS	118%	20-150%
	13C8-PFOS	112%	20-150%
	13C8-FOSA	81%	20-150%
	d3-MeFOSA	84%	20-150%
	d5-EtFOSA	91%	20-150%
	d3-MeFOSAA	112%	20-150%
	d5-EtFOSAA	108%	20-150%
	d7-MeFOSE	83%	20-150%
	d9-EtFOSE	91%	20-150%
	13C2-4:2FTS	118%	20-180%
	13C2-6:2FTS	123%	20-180%
	13C2-8:2FTS	121%	20-180%
	13C3-HFPO-DA	108%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99174-LLBS	6Q25051.D	1	09/25/23	MV	09/25/23	OP99174	S6Q357

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-2, FC9604-3, FC9604-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0286	95	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0139	93	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0067	89	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0068	91	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0069	92	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0064	85	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0065	87	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0072	96	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0074	99	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0063	84	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0074	99	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0061	92	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0065	92	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0068	99	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0065	91	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0062	89	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0069	96	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0060	83	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0055	76	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0272	97	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0308	108	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0279	97	40-150
754-91-6	PFOSA	0.0075	0.0080	107	40-150
31506-32-8	MeFOSA	0.015	0.0141	94	40-150
4151-50-2	EtFOSA	0.015	0.0133	89	40-150
2355-31-9	MeFOSAA	0.0075	0.0067	89	40-150
2991-50-6	EtFOSAA	0.0075	0.0065	87	40-150
24448-09-7	MeFOSE	0.0375	0.0328	87	40-150
1691-99-2	EtFOSE	0.0375	0.0328	87	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0133	89	40-150
919005-14-4	ADONA	0.0142	0.0144	102	40-150
377-73-1	PFMPA	0.015	0.0133	89	40-150
863090-89-5	PFMBA	0.015	0.0136	91	40-150
151772-58-6	NFDHA	0.015	0.0138	92	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	0.0132	93	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99174-LLBS	6Q25051.D	1	09/25/23	MV	09/25/23	OP99174	S6Q357

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-2, FC9604-3, FC9604-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0117	88	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0295	79	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.163	87	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.177	94	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	105%	20-150%
	13C5-PFPeA	106%	20-150%
	13C5-PFHxA	108%	20-150%
	13C4-PFHpA	106%	20-150%
	13C8-PFOA	108%	20-150%
	13C9-PFNA	113%	20-150%
	13C6-PFDA	105%	20-150%
	13C7-PFUnDA	96%	20-150%
	13C2-PFDoDA	95%	20-150%
	13C2-PFTeDA	78%	20-150%
	13C3-PFBS	111%	20-150%
	13C3-PFHxS	105%	20-150%
	13C8-PFOS	107%	20-150%
	13C8-FOSA	75%	20-150%
	d3-MeFOSA	74%	20-150%
	d5-EtFOSA	75%	20-150%
	d3-MeFOSAA	107%	20-150%
	d5-EtFOSAA	106%	20-150%
	d7-MeFOSE	70%	20-150%
	d9-EtFOSE	76%	20-150%
	13C2-4:2FTS	117%	20-180%
	13C2-6:2FTS	104%	20-180%
	13C2-8:2FTS	106%	20-180%
	13C3-HFPO-DA	100%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-BS	6Q24824.D	1	09/21/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0976	98	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0495	99	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0239	96	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0241	96	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0234	94	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0252	101	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0240	96	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0231	92	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0231	92	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0210	84	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0236	94	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0219	99	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0232	99	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0224	98	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0215	90	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0214	92	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0235	98	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0225	93	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0220	91	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0930	99	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0919	97	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0914	95	40-150
754-91-6	PFOSA	0.025	0.0249	100	40-150
31506-32-8	MeFOSA	0.05	0.0490	98	40-150
4151-50-2	EtFOSA	0.05	0.0453	91	40-150
2355-31-9	MeFOSAA	0.025	0.0251	100	40-150
2991-50-6	EtFOSAA	0.025	0.0274	110	40-150
24448-09-7	MeFOSE	0.125	0.119	95	40-150
1691-99-2	EtFOSE	0.125	0.113	90	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0492	98	40-150
919005-14-4	ADONA	0.0473	0.0453	96	40-150
377-73-1	PFMPA	0.05	0.0484	97	40-150
863090-89-5	PFMBA	0.05	0.0499	100	40-150
151772-58-6	NFDHA	0.05	0.0486	97	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0438	94	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0453	96	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-BS	6Q24824.D	1	09/21/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0439	99	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.107	86	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.601	96	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.603	96	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	86%	20-150%
	13C5-PFPeA	109%	20-150%
	13C5-PFHxA	110%	20-150%
	13C4-PFHpA	109%	20-150%
	13C8-PFOA	110%	20-150%
	13C9-PFNA	114%	20-150%
	13C6-PFDA	106%	20-150%
	13C7-PFUnDA	113%	20-150%
	13C2-PFDoDA	109%	20-150%
	13C2-PFTeDA	98%	20-150%
	13C3-PFBS	105%	20-150%
	13C3-PFHxS	108%	20-150%
	13C8-PFOS	122%	20-150%
	13C8-FOSA	90%	20-150%
	d3-MeFOSA	91%	20-150%
	d5-EtFOSA	98%	20-150%
	d3-MeFOSAA	115%	20-150%
	d5-EtFOSAA	111%	20-150%
	d7-MeFOSE	81%	20-150%
	d9-EtFOSE	91%	20-150%
	13C2-4:2FTS	111%	20-180%
	13C2-6:2FTS	116%	20-180%
	13C2-8:2FTS	113%	20-180%
	13C3-HFPO-DA	113%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99174-BS ^a	6Q25050.D	1	09/25/23	MV	09/25/23	OP99174	S6Q357

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-2, FC9604-3, FC9604-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.100	100	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0479	96	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0236	94	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0230	92	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0255	102	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0236	94	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0218	87	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0239	96	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0268	107	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0250	100	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0258	103	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0216	97	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0245	104	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0237	104	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0210	88	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0209	90	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0198	82	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0210	87	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0205	85	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0949	101	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.110	116	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0993	103	40-150
754-91-6	PFOSA	0.025	0.0251	100	40-150
31506-32-8	MeFOSA	0.05	0.0508	102	40-150
4151-50-2	EtFOSA	0.05	0.0475	95	40-150
2355-31-9	MeFOSAA	0.025	0.0255	102	40-150
2991-50-6	EtFOSAA	0.025	0.0242	97	40-150
24448-09-7	MeFOSE	0.125	0.110	88	40-150
1691-99-2	EtFOSE	0.125	0.123	98	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0453	91	40-150
919005-14-4	ADONA	0.0473	0.0501	106	40-150
377-73-1	PFMPA	0.05	0.0299	60	40-150
863090-89-5	PFMBA	0.05	0.0468	94	40-150
151772-58-6	NFDHA	0.05	0.0474	95	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0498	107	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0460	97	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99174-BS ^a	6Q25050.D	1	09/25/23	MV	09/25/23	OP99174	S6Q357

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-2, FC9604-3, FC9604-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0411	92	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.153	122	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.585	94	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.605	97	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	39%	20-150%
	13C5-PFPeA	105%	20-150%
	13C5-PFHxA	107%	20-150%
	13C4-PFHpA	108%	20-150%
	13C8-PFOA	95%	20-150%
	13C9-PFNA	105%	20-150%
	13C6-PFDA	119%	20-150%
	13C7-PFUnDA	109%	20-150%
	13C2-PFDoDA	102%	20-150%
	13C2-PFTeDA	87%	20-150%
	13C3-PFBS	107%	20-150%
	13C3-PFHxS	102%	20-150%
	13C8-PFOS	115%	20-150%
	13C8-FOSA	83%	20-150%
	d3-MeFOSA	86%	20-150%
	d5-EtFOSA	88%	20-150%
	d3-MeFOSAA	102%	20-150%
	d5-EtFOSAA	107%	20-150%
	d7-MeFOSE	82%	20-150%
	d9-EtFOSE	83%	20-150%
	13C2-4:2FTS	118%	20-180%
	13C2-6:2FTS	102%	20-180%
	13C2-8:2FTS	102%	20-180%
	13C3-HFPO-DA	97%	20-150%

(a) Insufficient sample for MS/MSD.

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-MS	6Q24837.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355
FC9640-1	6Q24836.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

CAS No.	Compound	FC9640-1 ug/l	Spike Q	MS ug/l	MS %	Limits	
375-22-4	Perfluorobutanoic acid	0.0142		0.0943	0.116	108	40-150
2706-90-3	Perfluoropentanoic acid	0.0123		0.0472	0.0649	112	40-150
307-24-4	Perfluorohexanoic acid	0.0063		0.0236	0.0305	103	40-150
375-85-9	Perfluoroheptanoic acid	0.0050		0.0236	0.0307	109	40-150
335-67-1	Perfluorooctanoic acid	0.0058		0.0236	0.0311	107	40-150
375-95-1	Perfluorononanoic acid	0.0016	J	0.0236	0.0262	104	40-150
335-76-2	Perfluorodecanoic acid	0.0035	U	0.0236	0.0246	104	40-150
2058-94-8	Perfluoroundecanoic acid	0.0035	U	0.0236	0.0226	96	40-150
307-55-1	Perfluorododecanoic acid	0.0035	U	0.0236	0.0247	105	40-150
72629-94-8	Perfluorotridecanoic acid	0.0035	U	0.0236	0.0230	98	40-150
376-06-7	Perfluorotetradecanoic acid	0.0035	U	0.0236	0.0264	112	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0043		0.0209	0.0265	106	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0044	U	0.0222	0.0242	109	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0050		0.0216	0.0266	100	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00046	J	0.0225	0.0253	111	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0160		0.0219	0.0407	113	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0035	U	0.0227	0.0237	104	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0035	U	0.0228	0.0213	94	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0044	U	0.0229	0.0211	92	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.018	U	0.0884	0.0970	110	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U	0.0896	0.0918	102	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	0.0906	0.104	115	40-150
754-91-6	PFOSA	0.0035	U	0.0236	0.0254	108	40-150
31506-32-8	MeFOSA	0.0070	U	0.0472	0.0515	109	40-150
4151-50-2	EtFOSA	0.0070	U	0.0472	0.0478	101	40-150
2355-31-9	MeFOSAA	0.0044	U	0.0236	0.0242	103	40-150
2991-50-6	EtFOSAA	0.0044	U	0.0236	0.0285	121	40-150
24448-09-7	MeFOSE	0.035	U	0.118	0.129	109	40-150
1691-99-2	EtFOSE	0.035	U	0.118	0.124	105	40-150
13252-13-6	HFPO-DA (GenX)	0.0035	U	0.0472	0.0483	102	40-150
919005-14-4	ADONA	0.0070	U	0.0446	0.0479	107	40-150
377-73-1	PFMPA	0.0070	U	0.0472	0.0519	110	40-150
863090-89-5	PFMBA	0.0070	U	0.0472	0.0531	113	40-150
151772-58-6	NFDHA	0.0070	U	0.0472	0.0485	103	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0070	U	0.0441	0.0457	104	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0070	U	0.0446	0.0404	91	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-MS	6Q24837.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355
FC9640-1	6Q24836.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

CAS No.	Compound	FC9640-1 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0070 U	0.042	0.0429	102	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.018 U	0.118	0.0955	81	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.088 U	0.59	0.599	102	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.088 U	0.59	0.633	107	40-150

CAS No.	ID Standard Recoveries	MS	FC9640-1	Limits
	13C4-PFBA	97%	104%	20-150%
	13C5-PFPeA	100%	109%	20-150%
	13C5-PFHxA	106%	111%	20-150%
	13C4-PFHpA	103%	115%	20-150%
	13C8-PFOA	94%	106%	20-150%
	13C9-PFNA	97%	106%	20-150%
	13C6-PFDA	105%	114%	20-150%
	13C7-PFUnDA	99%	110%	20-150%
	13C2-PFDoDA	92%	104%	20-150%
	13C2-PFTeDA	83%	91%	20-150%
	13C3-PFBS	105%	108%	20-150%
	13C3-PFHxS	103%	109%	20-150%
	13C8-PFOS	90%	106%	20-150%
	13C8-FOSA	74%	85%	20-150%
	d3-MeFOSA	77%	86%	20-150%
	d5-EtFOSA	84%	88%	20-150%
	d3-MeFOSAA	92%	105%	20-150%
	d5-EtFOSAA	83%	90%	20-150%
	d7-MeFOSE	74%	83%	20-150%
	d9-EtFOSE	80%	88%	20-150%
	13C2-4:2FTS	96%	104%	20-180%
	13C2-6:2FTS	102%	114%	20-180%
	13C2-8:2FTS	97%	99%	20-180%
	13C3-HFPO-DA	108%	114%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-DUP	6Q24839.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355
FC9640-2	6Q24838.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

CAS No.	Compound	FC9640-2 ug/l	DUP Q	ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.0129	J	0.0144	J	11	30
2706-90-3	Perfluoropentanoic acid	0.0112		0.0124		10	30
307-24-4	Perfluorohexanoic acid	0.0058		0.0065		11	30
375-85-9	Perfluoroheptanoic acid	0.0052		0.0055		6	30
335-67-1	Perfluorooctanoic acid	0.0052		0.0057		9	30
375-95-1	Perfluorononanoic acid	0.0013	J	0.0013	J	0	30
335-76-2	Perfluorodecanoic acid	0.0036	U	ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0036	U	ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0036	U	ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0036	U	ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0036	U	ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0036		0.0040		11	30
2706-91-4	Perfluoropentanesulfonic acid	0.0045	U	ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0045		0.0054		18	30
375-92-8	Perfluoroheptanesulfonic acid	0.0036	U	ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0114		0.0149		27	30
68259-12-1	Perfluorononanesulfonic acid	0.0036	U	ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0036	U	ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U	ND		nc	30
757124-72-44:2	Fluorotelomer sulfonate	0.018	U	ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U	ND		nc	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	ND		nc	30
754-91-6	PFOSA	0.0036	U	ND		nc	30
31506-32-8	MeFOSA	0.0073	U	ND		nc	30
4151-50-2	EtFOSA	0.0073	U	ND		nc	30
2355-31-9	MeFOSAA	0.0045	U	ND		nc	30
2991-50-6	EtFOSAA	0.0045	U	ND		nc	30
24448-09-7	MeFOSE	0.036	U	ND		nc	30
1691-99-2	EtFOSE	0.036	U	ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.0036	U	ND		nc	30
919005-14-4	ADONA	0.0073	U	ND		nc	30
377-73-1	PFMPA	0.0073	U	ND		nc	30
863090-89-5	PFMBA	0.0073	U	ND		nc	30
151772-58-6	NFDHA	0.0073	U	ND		nc	30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0073	U	ND		nc	30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0073	U	ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC9604
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP99077-DUP	6Q24839.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355
FC9640-2	6Q24838.D	1	09/22/23	MV	09/19/23	OP99077	S6Q355

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC9604-1, FC9604-4, FC9604-5, FC9604-7

CAS No.	Compound	FC9640-2 ug/l	DUP Q	ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0073	U	ND		nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.018	U	ND		nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.091	U	ND		nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.091	U	ND		nc	30

CAS No.	ID Standard Recoveries	DUP	FC9640-2	Limits
	13C4-PFBA	104%	109%	20-150%
	13C5-PFPeA	102%	113%	20-150%
	13C5-PFHxA	105%	115%	20-150%
	13C4-PFHpA	106%	111%	20-150%
	13C8-PFOA	101%	109%	20-150%
	13C9-PFNA	100%	103%	20-150%
	13C6-PFDA	101%	111%	20-150%
	13C7-PFUnDA	94%	109%	20-150%
	13C2-PFDoDA	89%	102%	20-150%
	13C2-PFTeDA	76%	97%	20-150%
	13C3-PFBS	110%	115%	20-150%
	13C3-PFHxS	108%	111%	20-150%
	13C8-PFOS	105%	113%	20-150%
	13C8-FOSA	83%	86%	20-150%
	d3-MeFOSA	81%	87%	20-150%
	d5-EtFOSA	86%	94%	20-150%
	d3-MeFOSAA	100%	101%	20-150%
	d5-EtFOSAA	99%	95%	20-150%
	d7-MeFOSE	80%	86%	20-150%
	d9-EtFOSE	84%	94%	20-150%
	13C2-4:2FTS	103%	112%	20-180%
	13C2-6:2FTS	106%	118%	20-180%
	13C2-8:2FTS	95%	101%	20-180%
	13C3-HFPO-DA	105%	117%	20-150%

* = Outside of Control Limits.