The results set forth herein are provided by SGS North America Inc.

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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC5194

Sampling Date: 04/12/23

Report to:

AECOM, Inc
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ATTN: Katie Abbott

Total number of pages in report: **46**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Elvin Kumar 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV

Sections: 1 2 3 4 5 6

Table of Contents

Sample Summary

AECOM, INC.

Job No: FC5194

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FC5194-1	04/12/23	10:10	CP	04/13/23	AQ	Ground Water	AF-RHMW16-WGN01LF-2304W2
FC5194-2	04/12/23	10:15	MY	04/13/23	AQ	Ground Water	AF-RHMW02-WGN01LF-2304W2
FC5194-3	04/12/23	12:35	MY	04/13/23	AQ	Ground Water	AF-RHMW03-WGN01LF-2304W2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job No:** FC5194

Site: N6274223F0104 RH Fire Suppression System **Report Date:** 4/21/2023 3:46:21 PM

On 04/13/2023, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 4.1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC5194 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:** OP96403

Sample(s) FC5194-1MS, FC5194-2DUP were used as the QC samples indicated.

Blank Spike Recovery(s) for Perfluoroheptanoic acid, Perfluorohexanesulfonic acid, Perfluorohexanoic acid, Perfluorooctanoic acid are outside control limits.

Sample(s) FC5194-2 have surrogates outside control limits.

FC5194-1 for Perfluoroheptanoic acid: Associated Low Level BS outside of control limits high, sample was ND.

FC5194-1 for Perfluorohexanesulfonic acid: Associated Low Level BS outside of control limits high, sample was ND.

FC5194-1 for Perfluorohexanoic acid: Associated Low Level BS outside of control limits high, sample was ND.

FC5194-1 for Perfluorooctanoic acid: Associated Low Level BS outside of control limits high, sample was ND.

FC5194-2 for Perfluoroheptanesulfonic acid: Associated Low Level BS outside of control limits high, sample was ND.

FC5194-2 for Perfluorohexanoic acid: Associated Low Level BS outside of control limits high.

FC5194-2: Insufficient sample for re-extraction.

FC5194-3: Confirmation run.

Matrix: AQ **Batch ID:** OP96494

OP96494-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: FC5194
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/12/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC5194-1	**AF-RHMW16-WGN01LF-2304W2**					
No hits reported in this sample.						
FC5194-2	**AF-RHMW02-WGN01LF-2304W2**					
Perfluorohexanoic acid [a]		0.46 J	4.5	0.89	ng/l	EPA DRAFT 1633
FC5194-3	**AF-RHMW03-WGN01LF-2304W2**					
Perfluoropentanoic acid		2.4 J	9.8	2.0	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		1.6 J	4.9	0.98	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid		1.5 J	4.9	0.98	ng/l	EPA DRAFT 1633
6:2 Fluorotelomer sulfonate		10.1 J	20	7.8	ng/l	EPA DRAFT 1633

(a) Insufficient sample for re-extraction. Associated Low Level BS outside of control limits high.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-RHMW16-WGN01LF-2304W2		
Lab Sample ID:	FC5194-1	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43159.D	1	04/18/23 13:50	MV	04/14/23 10:00	OP96403	S4Q624
Run #2							

	Initial Volume	Final Volume
Run #1	510 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.9 U	20	3.9	1.9	ng/l	
2706-90-3	Perfluoropentanoic acid	2.0 U	9.8	2.0	0.92	ng/l	
307-24-4	Perfluorohexanoic acid [a]	0.98 U	4.9	0.98	0.49	ng/l	
375-85-9	Perfluoroheptanoic acid [a]	0.98 U	4.9	0.98	0.49	ng/l	
335-67-1	Perfluorooctanoic acid [a]	0.98 U	4.9	0.98	0.49	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U	4.9	2.0	0.60	ng/l	
335-76-2	Perfluorodecanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
2058-94-8	Perfluoroundecanoic acid	2.0 U	4.9	2.0	0.59	ng/l	
307-55-1	Perfluorododecanoic acid	2.0 U	4.9	2.0	0.59	ng/l	
72629-94-8	Perfluorotridecanoic acid	2.0 U	4.9	2.0	0.82	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.98 U	4.9	0.98	0.49	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.9 U	4.9	3.9	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid [a]	2.0 U	4.9	2.0	0.69	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.98 U	4.9	0.98	0.49	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U	4.9	2.0	0.53	ng/l	
68259-12-1	Perfluorononanesulfonic acid	2.0 U	4.9	2.0	0.56	ng/l	
335-77-3	Perfluorodecanesulfonic acid	2.0 U	4.9	2.0	0.63	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.9 U	4.9	3.9	1.1	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.8 U	20	7.8	3.2	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.8 U	20	7.8	3.4	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.8 U	20	7.8	4.0	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	2.0 U	4.9	2.0	0.66	ng/l	
31506-32-8	MeFOSA	2.0 U	4.9	2.0	0.98	ng/l	
4151-50-2	EtFOSA	2.0 U	4.9	2.0	0.98	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-RHMW16-WGN01LF-2304W2		
Lab Sample ID:	FC5194-1	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
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
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.9 U	4.9	3.9	0.98	ng/l	
2991-50-6	EtFOSAA	3.9 U	4.9	3.9	1.3	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.8 U	49	9.8	4.3	ng/l	
1691-99-2	EtFOSE	20 U	49	20	7.3	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.9 U	20	3.9	0.98	ng/l	
919005-14-4	ADONA	3.9 U	20	3.9	1.8	ng/l	
377-73-1	PFMPA	2.0 U	9.8	2.0	0.98	ng/l	
863090-89-5	PFMBA	3.9 U	9.8	3.9	1.1	ng/l	
151772-58-6	NFDHA	3.9 U	9.8	3.9	1.2	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.9 U	20	3.9	1.4	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.9 U	20	3.9	1.7	ng/l	
113507-82-7	PFEESA	2.0 U	9.8	2.0	0.76	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.8 U	25	9.8	4.4	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	20 U	120	20	8.6	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	20 U	120	20	7.7	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	115%		20-150%
	13C5-PFPeA	113%		20-150%
	13C5-PFHxA	111%		20-150%
	13C4-PFHpA	115%		20-150%
	13C8-PFOA	111%		20-150%
	13C9-PFNA	103%		20-150%
	13C6-PFDA	109%		20-150%
	13C7-PFUnDA	97%		20-150%
	13C2-PFDoDA	87%		20-150%
	13C2-PFTeDA	72%		20-150%
	13C3-PFBS	111%		20-150%
	13C3-PFHxS	109%		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-RHMW16-WGN01LF-2304W2		
Lab Sample ID:	FC5194-1	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	99%		20-150%
	13C8-FOSA	87%		20-150%
	d3-MeFOSA	90%		20-150%
	d5-EtFOSA	87%		20-150%
	d3-MeFOSAA	98%		20-150%
	d5-EtFOSAA	106%		20-150%
	d7-MeFOSE	71%		20-150%
	d9-EtFOSE	69%		20-150%
	13C2-4:2FTS	131%		20-150%
	13C2-6:2FTS	136%		20-150%
	13C2-8:2FTS	113%		20-150%
	13C3-HFPO-DA	115%		20-150%

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

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

Report of Analysis

Client Sample ID:	AF-RHMW02-WGN01LF-2304W2		
Lab Sample ID:	FC5194-2	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	4Q43163.D	1	04/18/23 14:57	MV	04/14/23 10:00	OP96403	S4Q624
Run #2							

	Initial Volume	Final Volume
Run #1	560 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.6 U	18	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	8.9	1.8	0.84	ng/l	
307-24-4	Perfluorohexanoic acid [b]	0.46	4.5	0.89	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid [c]	0.89 U	4.5	0.89	0.45	ng/l	
335-67-1	Perfluorooctanoic acid [c]	0.89 U	4.5	0.89	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	4.5	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	0.89 U	4.5	0.89	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	4.5	1.8	0.54	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	4.5	1.8	0.54	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	4.5	1.8	0.75	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.89 U	4.5	0.89	0.45	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.89 U	4.5	0.89	0.45	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.6 U	4.5	3.6	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	4.5	1.8	0.62	ng/l	
375-92-8	Perfluoroheptanesulfonic acid [c]	0.89 U	4.5	0.89	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	4.5	1.8	0.48	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	4.5	1.8	0.51	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	4.5	1.8	0.57	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.6 U	4.5	3.6	1.0	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.1 U	18	7.1	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.1 U	18	7.1	3.1	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.1 U	18	7.1	3.7	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.8 U	4.5	1.8	0.60	ng/l	
31506-32-8	MeFOSA	1.8 U	4.5	1.8	0.89	ng/l	
4151-50-2	EtFOSA	1.8 U	4.5	1.8	0.89	ng/l	

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

Report of Analysis

Client Sample ID:	AF-RHMW02-WGN01LF-2304W2		
Lab Sample ID:	FC5194-2	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
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
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.89	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	8.9 U	45	8.9	3.9	ng/l	
1691-99-2	EtFOSE	18 U	45	18	6.6	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.6 U	18	3.6	0.89	ng/l	
919005-14-4	ADONA	3.6 U	18	3.6	1.7	ng/l	
377-73-1	PFMPA	1.8 U	8.9	1.8	0.89	ng/l	
863090-89-5	PFMBA	3.6 U	8.9	3.6	1.0	ng/l	
151772-58-6	NFDHA	3.6 U	8.9	3.6	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.6 U	18	3.6	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.6 U	18	3.6	1.6	ng/l	
113507-82-7	PFEESA	1.8 U	8.9	1.8	0.70	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	8.9 U	22	8.9	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	110	18	7.8	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	110	18	7.0	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	95%		20-150%
	13C5-PFPeA	89%		20-150%
	13C5-PFHxA	120%		20-150%
	13C4-PFHpA	128%		20-150%
	13C8-PFOA	120%		20-150%
	13C9-PFNA	119%		20-150%
	13C6-PFDA	127%		20-150%
	13C7-PFUnDA	120%		20-150%
	13C2-PFDoDA	108%		20-150%
	13C2-PFTeDA	88%		20-150%
	13C3-PFBS	112%		20-150%
	13C3-PFHxS	117%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW02-WGN01LF-2304W2		
Lab Sample ID:	FC5194-2	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
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	117%		20-150%
	13C8-FOSA	94%		20-150%
	d3-MeFOSA	99%		20-150%
	d5-EtFOSA	99%		20-150%
	d3-MeFOSAA	108%		20-150%
	d5-EtFOSAA	111%		20-150%
	d7-MeFOSE	76%		20-150%
	d9-EtFOSE	75%		20-150%
	13C2-4:2FTS	156%		20-150%
	13C2-6:2FTS	110%		20-150%
	13C2-8:2FTS	100%		20-150%
	13C3-HFPO-DA	100%		20-150%

(a) Insufficient sample for re-extraction.
(b) Associated Low Level BS outside of control limits high.
(c) Associated Low Level BS outside of control limits high, sample was ND.

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

Report of Analysis

Client Sample ID:	AF-RHMW03-WGN01LF-2304W2		
Lab Sample ID:	FC5194-3	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4Q43361.D	1	04/21/23 00:01	MV	04/20/23 09:30	OP96494	S4Q626
Run #2 [a]	4Q43165.D	1	04/18/23 15:25	MV	04/14/23 10:00	OP96403	S4Q624

	Initial Volume	Final Volume
Run #1	510 ml	5.0 ml
Run #2	530 ml	5.0 ml

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.9 U	20	3.9	1.9	ng/l	
2706-90-3	Perfluoropentanoic acid	2.4	9.8	2.0	0.92	ng/l	J
307-24-4	Perfluorohexanoic acid	1.6	4.9	0.98	0.49	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.5	4.9	0.98	0.49	ng/l	J
335-67-1	Perfluorooctanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
375-95-1	Perfluorononanoic acid	2.0 U	4.9	2.0	0.60	ng/l	
335-76-2	Perfluorodecanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
2058-94-8	Perfluoroundecanoic acid	2.0 U	4.9	2.0	0.59	ng/l	
307-55-1	Perfluorododecanoic acid	2.0 U	4.9	2.0	0.59	ng/l	
72629-94-8	Perfluorotridecanoic acid	2.0 U	4.9	2.0	0.82	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.98 U	4.9	0.98	0.49	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.98 U	4.9	0.98	0.49	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.9 U	4.9	3.9	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	2.0 U	4.9	2.0	0.69	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.98 U	4.9	0.98	0.49	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	2.0 U	4.9	2.0	0.53	ng/l	
68259-12-1	Perfluorononanesulfonic acid	2.0 U	4.9	2.0	0.56	ng/l	
335-77-3	Perfluorodecanesulfonic acid	2.0 U	4.9	2.0	0.63	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.9 U	4.9	3.9	1.1	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.8 U	20	7.8	3.2	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	10.1	20	7.8	3.4	ng/l	J
39108-34-4	8:2 Fluorotelomer sulfonate	7.8 U	20	7.8	4.0	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	2.0 U	4.9	2.0	0.66	ng/l	
31506-32-8	MeFOSA	2.0 U	4.9	2.0	0.98	ng/l	
4151-50-2	EtFOSA	2.0 U	4.9	2.0	0.98	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-RHMW03-WGN01LF-2304W2		
Lab Sample ID:	FC5194-3	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
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
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.9 U	4.9	3.9	0.98	ng/l	
2991-50-6	EtFOSAA	3.9 U	4.9	3.9	1.3	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.8 U	49	9.8	4.3	ng/l	
1691-99-2	EtFOSE	20 U	49	20	7.3	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.9 U	20	3.9	0.98	ng/l	
919005-14-4	ADONA	3.9 U	20	3.9	1.8	ng/l	
377-73-1	PFMPA	2.0 U	9.8	2.0	0.98	ng/l	
863090-89-5	PFMBA	3.9 U	9.8	3.9	1.1	ng/l	
151772-58-6	NFDHA	3.9 U	9.8	3.9	1.2	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.9 U	20	3.9	1.4	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.9 U	20	3.9	1.7	ng/l	
113507-82-7	PFEESA	2.0 U	9.8	2.0	0.76	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.8 U	25	9.8	4.4	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	20 U	120	20	8.6	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	20 U	120	20	7.7	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	66%	108%	20-150%
	13C5-PFPeA	83%	107%	20-150%
	13C5-PFHxA	90%	109%	20-150%
	13C4-PFHpA	87%	111%	20-150%
	13C8-PFOA	86%	103%	20-150%
	13C9-PFNA	84%	100%	20-150%
	13C6-PFDA	86%	101%	20-150%
	13C7-PFUnDA	73%	91%	20-150%
	13C2-PFDoDA	60%	78%	20-150%
	13C2-PFTeDA	58%	53%	20-150%
	13C3-PFBS	102%	116%	20-150%
	13C3-PFHxS	92%	108%	20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW03-WGN01LF-2304W2		
Lab Sample ID:	FC5194-3	**Date Sampled:**	04/12/23
Matrix:	AQ - Ground Water	**Date Received:**	04/13/23
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	80%	102%	20-150%
	13C8-FOSA	70%	83%	20-150%
	d3-MeFOSA	64%	88%	20-150%
	d5-EtFOSA	61%	90%	20-150%
	d3-MeFOSAA	83%	102%	20-150%
	d5-EtFOSAA	76%	97%	20-150%
	d7-MeFOSE	57%	70%	20-150%
	d9-EtFOSE	60%	73%	20-150%
	13C2-4:2FTS	90%	104%	20-150%
	13C2-6:2FTS	75%	94%	20-150%
	13C2-8:2FTS	71%	90%	20-150%
	13C3-HFPO-DA	77%	105%	20-150%

(a) Confirmation run.

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

SGS

SGS North America Inc - Orlando
Chain of Custody

FC5194

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

COC #: 2304W2AFSG06

PAGE 1 OF 1

SGS - ORLANDO JOB # :

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

Company Name: AECOM
Address: 1001 Bishop St. ste 1600
City: Honolulu State: HI Zip: 96813
Project Contact: Katie Abbott Email: katie.abbott@aecom.com
Project Manager: Watson Tanji Email: watson.tanji@aecom.com
Phone #: 303-796-4624 / 808-954-4512
Sampler(s) Name(s) (Printed)
Sampler 1: Cristian Pérez Sampler 2:

Project Information

Project Name: N6274223F0104 RH Fire Suppression System
Street
City Honolulu State Hawaii
Project # 60697810
Fax #
Client Purchase Order #

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

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
1	AF-RHMW16-WGN01LF-2304W2	4/12/23	1010	CP	GW	3		x								x	

4/12/23

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
[x] 5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
United AWB 016-02555781

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 Cristian Pérez / AECOM	4/12/23 1137	2 Hannah Bumby / AECOM	3 Hannah Bumby / AECOM	4/12/23 1520	4 4/13/23
Relinquished by/Affiliation	**Date Time:**	**Received By/Affiliation**	**Relinquished By/Affiliation**	**Date Time:**	**Received By/Affiliation**
5		6	7		8 1500

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

4/12 PFAS_COCs_ALL.xls Rev 031318

5.1

5

FC5194: Chain of Custody
Page 1 of 4

SGS North America Inc - Orlando
Chain of Custody

FC5194

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

SGS - ORLANDO JOB # :

COC #: 2304W2AFSG01

PAGE 1 OF 1

SGS - ORLANDO Quote #	SKIFF #

Client / Reporting Information

Company Name: AECOM
Address: 1001 Bishop St. ste 1600
City: Honolulu State: HI Zip: 96813
Project Contact: Katie Abbott Email: katie.abbott@aecom.com
Project Manager: Watson Tanji Email: watson.tanji@aecom.com
Phone #: 303-796-4624 / 808-954-4512
Sampler(s) Name(s) (Printed)
Sampler 1: Matt Yim Sampler 2: Christi Womack

Project Information

Project Name: N6274223F0104 RH Fire Suppression System
Street
City Honolulu State Hawaii
Project # 60697810
Fax #
Client Purchase Order #

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

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	CONTAINER INFORMATION MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
2	AF-RHMW02-WGN01LF-2304W2	4/12/23	1015	M Y, CW	GW	3		X								X	

M Y 4/12/23

INITIAL ASSESSMENT

LABEL VERIFICATION

M Y 4/12/23

Turnaround Time (Business days)

10 Day (Business) Approved By: / Date:
7 Day
5 Day
3 Day *RUSH*
2 Day *RUSH*
1 Day *RUSH*
Other
Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

[ ] COMMERCIAL "A" (RESULTS ONLY)
[ ] COMMERCIAL "B" (RESULTS PLUS QC)
[ ] REDT1 (EPA LEVEL 3)
[x] FULLT1 (EPA LEVEL 4)
[x] EDD'S

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
United AWD 016-025557781

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 Matt Yim AECOM	4/12/23 1452	2 Miranda Debarme/AECOM	3 Miranda Debarme/AECOM	4/12/23 1520	4 4/13/23
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8 1550

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 4.2 IR#1

http://www.sgs.com/en/terms-and-conditions

PFAS_COCs_ALL.xls Rev 031318

FC5194: Chain of Custody
Page 2 of 4

SGS North America Inc - Orlando
Chain of Custody

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

FC5194

SGS - ORLANDO JOB # :

COC #: 2304W2AFSG02

PAGE 1 OF 1

SGS - ORLANDO Quote #	SKIFF #

Client / Reporting Information

Company Name: AECOM
Address: 1001 Bishop St. ste 1600
City: Honolulu State: HI Zip: 96813
Project Contact: Katie Abbott Email: katie.abbott@aecom.com
Project Manager: Watson Tanji Email: watson.tanji@aecom.com
Phone #: 303-796-4624 / 808-954-4512
Sampler(s) Name(s) (Printed)
Sampler 1: Matt Yim Sampler 2: Chris Wowak

Project Information

Project Name: N6274223F0104 RH Fire Suppression System
Street
City Honolulu State Hawaii
Project # 60697810
Fax #
Client Purchase Order #

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

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
3	AF-RHMW03-WGN01LF-2304W2	4/12/23	1235	M.Y, C.W	GW	3		X								X	

MY 4/12/23

MY 4/12/23

Turnaround Time (Business days)

- 10 Day (Business) — Approved By: / Date:
- 7 Day
- [5 Day]
- 3 Day *RUSH*
- 2 Day *RUSH*
- 1 Day *RUSH*
- Other

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [x] FULLT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW

UNITED AWB 016-02555781

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 Matt Yim AECOM	4/12/23 1457	2 Miranda Delfarmo / AECOM	3 Miranda Delfarmo / AECOM	4/12/23 1570	4 4/13/23 750
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected):

http://www.sgs.com/en/terms-and-conditions

PFAS_COCs_ALL.xls Rev 031318

FC5194: Chain of Custody
Page 3 of 4

SGS Sample Receipt Summary

Job Number: FC5194 **Client:** AECOM **Project:** N6274223F0104 RH Fire Suppression System

Date / Time Received: 4/13/2023 3:00:00 PM **Delivery Method:** United Cargo/Airspace **Airbill #'s:** United Cargo AWB #: 016-02555781

Therm ID: IR 1; **Therm CF:** -0.1; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.2);

Cooler Temps (Corrected) °C: Cooler 1: (4.1);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

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

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230320 pH 10-12 25BDH07 Other: (Specify) pH 1.0 - 12.0 222221

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: NATHANS Date: 4/13/2023 3:00:00 PM Reviewer: CD Date: 4/17/2023

FC5194: Chain of Custody
Page 4 of 4

QC Evaluation: DOD QSM5.x Limits

Job Number: FC5194
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 04/12/23

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

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

* Sample used for QC is not from job FC5194

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: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-IBLK	4Q43148.D	1	04/18/23	MV	n/a	n/a	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Instrument Blank

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-IBLK	4Q43148.D	1	04/18/23	MV	n/a	n/a	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

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

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	103%	20-150%
	13C5-PFPeA	98%	20-150%
	13C5-PFHxA	102%	20-150%
	13C4-PFHpA	104%	20-150%
	13C8-PFOA	101%	20-150%
	13C9-PFNA	98%	20-150%
	13C6-PFDA	103%	20-150%
	13C7-PFUnDA	101%	20-150%
	13C2-PFDoDA	98%	20-150%
	13C2-PFTeDA	91%	20-150%
	13C3-PFBS	104%	20-150%
	13C3-PFHxS	110%	20-150%
	13C8-PFOS	96%	20-150%
	13C8-FOSA	85%	20-150%
	d3-MeFOSA	97%	20-150%
	d5-EtFOSA	102%	20-150%
	d3-MeFOSAA	107%	20-150%
	d5-EtFOSAA	108%	20-150%
	d7-MeFOSE	80%	20-150%
	d9-EtFOSE	81%	20-150%
	13C2-4:2FTS	122%	20-150%
	13C2-6:2FTS	119%	20-150%
	13C2-8:2FTS	119%	20-150%
	13C3-HFPO-DA	103%	20-150%

Instrument Blank

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q626-IBLK	4Q43332.D	1	04/20/23	MV	n/a	n/a	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Instrument Blank

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q626-IBLK	4Q43332.D	1	04/20/23	MV	n/a	n/a	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

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

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	97%	20-150%
	13C5-PFPeA	100%	20-150%
	13C5-PFHxA	96%	20-150%
	13C4-PFHpA	98%	20-150%
	13C8-PFOA	98%	20-150%
	13C9-PFNA	106%	20-150%
	13C6-PFDA	101%	20-150%
	13C7-PFUnDA	95%	20-150%
	13C2-PFDoDA	100%	20-150%
	13C2-PFTeDA	92%	20-150%
	13C3-PFBS	96%	20-150%
	13C3-PFHxS	99%	20-150%
	13C8-PFOS	101%	20-150%
	13C8-FOSA	97%	20-150%
	d3-MeFOSA	98%	20-150%
	d5-EtFOSA	106%	20-150%
	d3-MeFOSAA	97%	20-150%
	d5-EtFOSAA	96%	20-150%
	d7-MeFOSE	100%	20-150%
	d9-EtFOSE	103%	20-150%
	13C2-4:2FTS	95%	20-150%
	13C2-6:2FTS	97%	20-150%
	13C2-8:2FTS	91%	20-150%
	13C3-HFPO-DA	90%	20-150%

Continuing Calibration Blank

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-ICCB	4Q43162.D	1	04/18/23	MV	n/a	n/a	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

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Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q624-ICCB	4Q43162.D	1	04/18/23	MV	n/a	n/a	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-2

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

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	103%	20-150%
	13C5-PFPeA	103%	20-150%
	13C5-PFHxA	101%	20-150%
	13C4-PFHpA	106%	20-150%
	13C8-PFOA	99%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	102%	20-150%
	13C7-PFUnDA	101%	20-150%
	13C2-PFDoDA	98%	20-150%
	13C2-PFTeDA	88%	20-150%
	13C3-PFBS	103%	20-150%
	13C3-PFHxS	103%	20-150%
	13C8-PFOS	100%	20-150%
	13C8-FOSA	86%	20-150%
	d3-MeFOSAA	111%	20-150%
	d5-EtFOSAA	111%	20-150%
	13C2-4:2FTS	123%	20-150%
	13C2-6:2FTS	116%	20-150%
	13C2-8:2FTS	117%	20-150%

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Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q626-ICCB	4Q43357.D	1	04/20/23	MV	n/a	n/a	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S4Q626-ICCB	4Q43357.D	1	04/20/23	MV	n/a	n/a	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

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

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	102%	20-150%
	13C5-PFPeA	96%	20-150%
	13C5-PFHxA	102%	20-150%
	13C4-PFHpA	99%	20-150%
	13C8-PFOA	98%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	97%	20-150%
	13C7-PFUnDA	97%	20-150%
	13C2-PFDoDA	94%	20-150%
	13C2-PFTeDA	92%	20-150%
	13C3-PFBS	98%	20-150%
	13C3-PFHxS	99%	20-150%
	13C8-PFOS	96%	20-150%
	13C8-FOSA	96%	20-150%
	d3-MeFOSA	96%	20-150%
	d5-EtFOSA	98%	20-150%
	d3-MeFOSAA	102%	20-150%
	d5-EtFOSAA	103%	20-150%
	d7-MeFOSE	102%	20-150%
	d9-EtFOSE	98%	20-150%
	13C2-4:2FTS	112%	20-150%
	13C2-6:2FTS	109%	20-150%
	13C2-8:2FTS	98%	20-150%
	13C3-HFPO-DA	90%	20-150%

Method Blank Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-MB	4Q43156.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	0.00056	0.0050	0.00050	ug/l	J
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Method Blank Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-MB	4Q43156.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

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

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	109%	20-150%
	13C5-PFPeA	105%	20-150%
	13C5-PFHxA	106%	20-150%
	13C4-PFHpA	108%	20-150%
	13C8-PFOA	104%	20-150%
	13C9-PFNA	108%	20-150%
	13C6-PFDA	106%	20-150%
	13C7-PFUnDA	92%	20-150%
	13C2-PFDoDA	83%	20-150%
	13C2-PFTeDA	68%	20-150%
	13C3-PFBS	105%	20-150%
	13C3-PFHxS	107%	20-150%
	13C8-PFOS	103%	20-150%
	13C8-FOSA	77%	20-150%
	d3-MeFOSA	84%	20-150%
	d5-EtFOSA	80%	20-150%
	d3-MeFOSAA	108%	20-150%
	d5-EtFOSAA	98%	20-150%
	d7-MeFOSE	67%	20-150%
	d9-EtFOSE	66%	20-150%
	13C2-4:2FTS	129%	20-150%
	13C2-6:2FTS	124%	20-150%
	13C2-8:2FTS	108%	20-150%
	13C3-HFPO-DA	105%	20-150%

Method Blank Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-MB	4Q43360.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.020	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.010	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0050	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0050	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0050	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0050	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0050	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0050	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0050	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0050	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0050	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0050	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0050	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0050	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0050	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0050	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0050	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0050	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0050	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0050	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.050	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.050	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.020	0.0010	ug/l	
919005-14-4	ADONA	ND	0.020	0.0019	ug/l	
377-73-1	PFMPA	ND	0.010	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.010	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.010	0.0012	ug/l	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.020	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.020	0.0018	ug/l	

Method Blank Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-MB	4Q43360.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

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

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	108%	20-150%
	13C5-PFPeA	99%	20-150%
	13C5-PFHxA	106%	20-150%
	13C4-PFHpA	102%	20-150%
	13C8-PFOA	103%	20-150%
	13C9-PFNA	106%	20-150%
	13C6-PFDA	108%	20-150%
	13C7-PFUnDA	106%	20-150%
	13C2-PFDoDA	91%	20-150%
	13C2-PFTeDA	79%	20-150%
	13C3-PFBS	105%	20-150%
	13C3-PFHxS	109%	20-150%
	13C8-PFOS	105%	20-150%
	13C8-FOSA	66%	20-150%
	d3-MeFOSA	62%	20-150%
	d5-EtFOSA	65%	20-150%
	d3-MeFOSAA	107%	20-150%
	d5-EtFOSAA	97%	20-150%
	d7-MeFOSE	57%	20-150%
	d9-EtFOSE	65%	20-150%
	13C2-4:2FTS	130%	20-150%
	13C2-6:2FTS	132%	20-150%
	13C2-8:2FTS	118%	20-150%
	13C3-HFPO-DA	95%	20-150%

Blank Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-LLBS	4Q43155.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0322	107	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0184	123	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0137	183*	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0115	153*	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0145	193*	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0078	104	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0080	107	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0086	115	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0074	99	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0069	92	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0079	105	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0076	114	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0091	129	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0154	225*	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0089	125	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0099	142	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0081	112	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0066	91	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0065	89	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0281	0.0324	115	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0294	103	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0353	123	40-150
754-91-6	PFOSA	0.0075	0.0079	105	40-150
31506-32-8	MeFOSA	0.015	0.0151	101	40-150
4151-50-2	EtFOSA	0.015	0.0150	100	40-150
2355-31-9	MeFOSAA	0.0075	0.0069	92	40-150
2991-50-6	EtFOSAA	0.0075	0.0085	113	40-150
24448-09-7	MeFOSE	0.0375	0.0380	101	40-150
1691-99-2	EtFOSE	0.0375	0.0421	112	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0159	106	40-150
919005-14-4	ADONA	0.0142	0.0156	110	40-150
377-73-1	PFMPA	0.015	0.0164	109	40-150
863090-89-5	PFMBA	0.015	0.0162	108	40-150
151772-58-6	NFDHA	0.015	0.0167	111	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.014	0.0146	104	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0142	0.0143	101	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-LLBS	4Q43155.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

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	0.0361	96	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.188	0.200	107	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.193	103	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	124%	20-150%
	13C5-PFPeA	121%	20-150%
	13C5-PFHxA	122%	20-150%
	13C4-PFHpA	125%	20-150%
	13C8-PFOA	112%	20-150%
	13C9-PFNA	113%	20-150%
	13C6-PFDA	111%	20-150%
	13C7-PFUnDA	106%	20-150%
	13C2-PFDoDA	96%	20-150%
	13C2-PFTeDA	77%	20-150%
	13C3-PFBS	112%	20-150%
	13C3-PFHxS	116%	20-150%
	13C8-PFOS	116%	20-150%
	13C8-FOSA	89%	20-150%
	d3-MeFOSA	99%	20-150%
	d5-EtFOSA	99%	20-150%
	d3-MeFOSAA	112%	20-150%
	d5-EtFOSAA	115%	20-150%
	d7-MeFOSE	80%	20-150%
	d9-EtFOSE	79%	20-150%
	13C2-4:2FTS	129%	20-150%
	13C2-6:2FTS	131%	20-150%
	13C2-8:2FTS	111%	20-150%
	13C3-HFPO-DA	120%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-LLBS	4Q43359.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0338	113	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0186	124	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0086	115	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0085	113	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0102	136	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0081	108	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0095	127	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0092	123	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0091	121	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0085	113	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0087	116	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0076	114	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0087	123	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0085	124	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0096	134	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0097	139	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0073	101	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0086	119	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0077	106	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0281	0.0354	126	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0341	120	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0357	124	40-150
754-91-6	PFOSA	0.0075	0.0089	119	40-150
31506-32-8	MeFOSA	0.015	0.0176	117	40-150
4151-50-2	EtFOSA	0.015	0.0181	121	40-150
2355-31-9	MeFOSAA	0.0075	0.0089	119	40-150
2991-50-6	EtFOSAA	0.0075	0.0085	113	40-150
24448-09-7	MeFOSE	0.0375	0.0354	94	40-150
1691-99-2	EtFOSE	0.0375	0.0419	112	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0175	117	40-150
919005-14-4	ADONA	0.0142	0.0190	134	40-150
377-73-1	PFMPA	0.015	0.0185	123	40-150
863090-89-5	PFMBA	0.015	0.0184	123	40-150
151772-58-6	NFDHA	0.015	0.0200	133	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.014	0.0175	125	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0142	0.0178	126	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-LLBS	4Q43359.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0152	114	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0395	105	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.188	0.200	107	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.203	108	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	104%	20-150%
	13C5-PFPeA	95%	20-150%
	13C5-PFHxA	101%	20-150%
	13C4-PFHpA	102%	20-150%
	13C8-PFOA	103%	20-150%
	13C9-PFNA	106%	20-150%
	13C6-PFDA	98%	20-150%
	13C7-PFUnDA	99%	20-150%
	13C2-PFDoDA	94%	20-150%
	13C2-PFTeDA	79%	20-150%
	13C3-PFBS	104%	20-150%
	13C3-PFHxS	105%	20-150%
	13C8-PFOS	90%	20-150%
	13C8-FOSA	64%	20-150%
	d3-MeFOSA	57%	20-150%
	d5-EtFOSA	59%	20-150%
	d3-MeFOSAA	100%	20-150%
	d5-EtFOSAA	99%	20-150%
	d7-MeFOSE	50%	20-150%
	d9-EtFOSE	57%	20-150%
	13C2-4:2FTS	119%	20-150%
	13C2-6:2FTS	121%	20-150%
	13C2-8:2FTS	108%	20-150%
	13C3-HFPO-DA	89%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-BS	4Q43154.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.106	106	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0589	118	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0271	108	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0279	112	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0281	112	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0278	111	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0271	108	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0266	106	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0272	109	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0256	102	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0276	110	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0239	108	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0285	121	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0258	113	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0312	131	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0305	131	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0293	122	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0300	124	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0271	112	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0938	0.112	119	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.105	111	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.111	116	40-150
754-91-6	PFOSA	0.025	0.0293	117	40-150
31506-32-8	MeFOSA	0.05	0.0540	108	40-150
4151-50-2	EtFOSA	0.05	0.0530	106	40-150
2355-31-9	MeFOSAA	0.025	0.0260	104	40-150
2991-50-6	EtFOSAA	0.025	0.0286	114	40-150
24448-09-7	MeFOSE	0.125	0.141	113	40-150
1691-99-2	EtFOSE	0.125	0.138	110	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0598	120	40-150
919005-14-4	ADONA	0.0473	0.0579	123	40-150
377-73-1	PFMPA	0.05	0.0580	116	40-150
863090-89-5	PFMBA	0.05	0.0586	117	40-150
151772-58-6	NFDHA	0.05	0.0569	114	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0468	0.0535	114	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0473	0.0553	117	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-BS	4Q43154.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0491	110	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.136	109	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.625	0.698	112	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.688	110	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	110%	20-150%
	13C5-PFPeA	104%	20-150%
	13C5-PFHxA	109%	20-150%
	13C4-PFHpA	109%	20-150%
	13C8-PFOA	103%	20-150%
	13C9-PFNA	104%	20-150%
	13C6-PFDA	107%	20-150%
	13C7-PFUnDA	103%	20-150%
	13C2-PFDoDA	97%	20-150%
	13C2-PFTeDA	79%	20-150%
	13C3-PFBS	107%	20-150%
	13C3-PFHxS	103%	20-150%
	13C8-PFOS	90%	20-150%
	13C8-FOSA	81%	20-150%
	d3-MeFOSA	89%	20-150%
	d5-EtFOSA	88%	20-150%
	d3-MeFOSAA	106%	20-150%
	d5-EtFOSAA	105%	20-150%
	d7-MeFOSE	73%	20-150%
	d9-EtFOSE	74%	20-150%
	13C2-4:2FTS	108%	20-150%
	13C2-6:2FTS	122%	20-150%
	13C2-8:2FTS	110%	20-150%
	13C3-HFPO-DA	105%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-BS [a]	4Q43358.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.113	113	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0602	120	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0278	111	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0285	114	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0313	125	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0261	104	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0301	120	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0280	112	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0283	113	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0283	113	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0269	108	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0259	117	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0271	115	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0251	110	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0289	121	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0273	118	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0272	113	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0270	112	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0239	99	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0938	0.110	117	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.116	122	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.129	134	40-150
754-91-6	PFOSA	0.025	0.0286	114	40-150
31506-32-8	MeFOSA	0.05	0.0587	117	40-150
4151-50-2	EtFOSA	0.05	0.0538	108	40-150
2355-31-9	MeFOSAA	0.025	0.0258	103	40-150
2991-50-6	EtFOSAA	0.025	0.0291	116	40-150
24448-09-7	MeFOSE	0.125	0.138	110	40-150
1691-99-2	EtFOSE	0.125	0.142	114	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0548	110	40-150
919005-14-4	ADONA	0.0473	0.0619	131	40-150
377-73-1	PFMPA	0.05	0.0328	66	40-150
863090-89-5	PFMBA	0.05	0.0592	118	40-150
151772-58-6	NFDHA	0.05	0.0604	121	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0468	0.0566	121	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0473	0.0566	120	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96494-BS [a]	4Q43358.D	1	04/20/23	MV	04/20/23	OP96494	S4Q626

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0482	108	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0774	62	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.625	0.672	108	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.661	106	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	33%	20-150%
	13C5-PFPeA	98%	20-150%
	13C5-PFHxA	108%	20-150%
	13C4-PFHpA	105%	20-150%
	13C8-PFOA	105%	20-150%
	13C9-PFNA	107%	20-150%
	13C6-PFDA	105%	20-150%
	13C7-PFUnDA	107%	20-150%
	13C2-PFDoDA	103%	20-150%
	13C2-PFTeDA	89%	20-150%
	13C3-PFBS	109%	20-150%
	13C3-PFHxS	113%	20-150%
	13C8-PFOS	96%	20-150%
	13C8-FOSA	71%	20-150%
	d3-MeFOSA	76%	20-150%
	d5-EtFOSA	80%	20-150%
	d3-MeFOSAA	108%	20-150%
	d5-EtFOSAA	108%	20-150%
	d7-MeFOSE	59%	20-150%
	d9-EtFOSE	64%	20-150%
	13C2-4:2FTS	121%	20-150%
	13C2-6:2FTS	119%	20-150%
	13C2-8:2FTS	99%	20-150%
	13C3-HFPO-DA	95%	20-150%

(a) Insufficient sample for MS/MSD.

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-MS	4Q43160.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624
FC5194-1	4Q43159.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	FC5194-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.020	U	0.098	0.109	111	40-150
2706-90-3	Perfluoropentanoic acid	0.0098	U	0.049	0.0595	121	40-150
307-24-4	Perfluorohexanoic acid	0.0049	U	0.0245	0.0297	121	40-150
375-85-9	Perfluoroheptanoic acid	0.0049	U	0.0245	0.0295	120	40-150
335-67-1	Perfluorooctanoic acid	0.0049	U	0.0245	0.0267	109	40-150
375-95-1	Perfluorononanoic acid	0.0049	U	0.0245	0.0286	117	40-150
335-76-2	Perfluorodecanoic acid	0.0049	U	0.0245	0.0282	115	40-150
2058-94-8	Perfluoroundecanoic acid	0.0049	U	0.0245	0.0281	115	40-150
307-55-1	Perfluorododecanoic acid	0.0049	U	0.0245	0.0292	119	40-150
72629-94-8	Perfluorotridecanoic acid	0.0049	U	0.0245	0.0272	111	40-150
376-06-7	Perfluorotetradecanoic acid	0.0049	U	0.0245	0.0276	113	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0049	U	0.0217	0.0269	124	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0049	U	0.0231	0.0305	132	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0049	U	0.0224	0.0258	115	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0049	U	0.0234	0.0288	123	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0049	U	0.0227	0.0262	115	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0049	U	0.0236	0.0261	111	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0049	U	0.0237	0.0242	102	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0049	U	0.0238	0.0241	101	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.020	U	0.0919	0.113	123	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.020	U	0.0931	0.108	116	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.020	U	0.0941	0.116	123	40-150
754-91-6	PFOSA	0.0049	U	0.0245	0.0288	118	40-150
31506-32-8	MeFOSA	0.0049	U	0.049	0.0557	114	40-150
4151-50-2	EtFOSA	0.0049	U	0.049	0.0556	113	40-150
2355-31-9	MeFOSAA	0.0049	U	0.0245	0.0268	109	40-150
2991-50-6	EtFOSAA	0.0049	U	0.0245	0.0292	119	40-150
24448-09-7	MeFOSE	0.049	U	0.123	0.144	118	40-150
1691-99-2	EtFOSE	0.049	U	0.123	0.140	114	40-150
13252-13-6	HFPO-DA (GenX)	0.020	U	0.049	0.0583	119	40-150
919005-14-4	ADONA	0.020	U	0.0463	0.0586	127	40-150
377-73-1	PFMPA	0.0098	U	0.049	0.0585	119	40-150
863090-89-5	PFMBA	0.0098	U	0.049	0.0579	118	40-150
151772-58-6	NFDHA	0.0098	U	0.049	0.0645	132	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.020	U	0.0458	0.0506	110	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.020	U	0.0463	0.0516	111	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-MS	4Q43160.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624
FC5194-1	4Q43159.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	FC5194-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0098	U	0.0436	0.0527	121	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.025	U	0.123	0.135	110	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.12	U	0.613	0.741	121	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.12	U	0.613	0.723	118	40-150

CAS No.	ID Standard Recoveries	MS	FC5194-1	Limits
	13C4-PFBA	110%	115%	20-150%
	13C5-PFPeA	106%	113%	20-150%
	13C5-PFHxA	104%	111%	20-150%
	13C4-PFHpA	108%	115%	20-150%
	13C8-PFOA	109%	111%	20-150%
	13C9-PFNA	94%	103%	20-150%
	13C6-PFDA	110%	109%	20-150%
	13C7-PFUnDA	98%	97%	20-150%
	13C2-PFDoDA	91%	87%	20-150%
	13C2-PFTeDA	80%	72%	20-150%
	13C3-PFBS	102%	111%	20-150%
	13C3-PFHxS	103%	109%	20-150%
	13C8-PFOS	102%	99%	20-150%
	13C8-FOSA	86%	87%	20-150%
	d3-MeFOSA	91%	90%	20-150%
	d5-EtFOSA	94%	87%	20-150%
	d3-MeFOSAA	102%	98%	20-150%
	d5-EtFOSAA	102%	106%	20-150%
	d7-MeFOSE	73%	71%	20-150%
	d9-EtFOSE	73%	69%	20-150%
	13C2-4:2FTS	117%	131%	20-150%
	13C2-6:2FTS	124%	136%	20-150%
	13C2-8:2FTS	116%	113%	20-150%
	13C3-HFPO-DA	105%	115%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-DUP	4Q43164.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624
FC5194-2 [a]	4Q43163.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	FC5194-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.018	U	ND		nc	30
2706-90-3	Perfluoropentanoic acid	0.0089	U	ND		nc	30
307-24-4	Perfluorohexanoic acid	0.00046	J	0.00052	J	12	30
375-85-9	Perfluoroheptanoic acid	0.0045	U	ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0045	U	ND		nc	30
375-95-1	Perfluorononanoic acid	0.0045	U	ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0045	U	ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0045	U	ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0045	U	ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0045	U	ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0045	U	ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0045	U	ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0045	U	ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0045	U	ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0045	U	ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0045	U	ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0045	U	ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0045	U	ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U	ND		nc	30
757124-72-4	4:2 Fluorotelomer sulfonate	0.018	U	ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U	ND		nc	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	ND		nc	30
754-91-6	PFOSA	0.0045	U	ND		nc	30
31506-32-8	MeFOSA	0.0045	U	ND		nc	30
4151-50-2	EtFOSA	0.0045	U	ND		nc	30
2355-31-9	MeFOSAA	0.0045	U	ND		nc	30
2991-50-6	EtFOSAA	0.0045	U	ND		nc	30
24448-09-7	MeFOSE	0.045	U	ND		nc	30
1691-99-2	EtFOSE	0.045	U	ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.018	U	ND		nc	30
919005-14-4	ADONA	0.018	U	ND		nc	30
377-73-1	PFMPA	0.0089	U	ND		nc	30
863090-89-5	PFMBA	0.0089	U	ND		nc	30
151772-58-6	NFDHA	0.0089	U	ND		nc	30
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.018	U	ND		nc	30
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.018	U	ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5194
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96403-DUP	4Q43164.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624
FC5194-2 [a]	4Q43163.D	1	04/18/23	MV	04/14/23	OP96403	S4Q624

The QC reported here applies to the following samples: **Method:** EPA DRAFT 1633

FC5194-1, FC5194-2

CAS No.	Compound	FC5194-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0089	U	ND		nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.022	U	ND		nc	30
914637-49-3	5:3 Fluorotelomer carboxylate	0.11	U	ND		nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.11	U	ND		nc	30

CAS No.	ID Standard Recoveries	DUP	FC5194-2	Limits
	13C4-PFBA	88%	95%	20-150%
	13C5-PFPeA	85%	89%	20-150%
	13C5-PFHxA	111%	120%	20-150%
	13C4-PFHpA	119%	128%	20-150%
	13C8-PFOA	107%	120%	20-150%
	13C9-PFNA	104%	119%	20-150%
	13C6-PFDA	103%	127%	20-150%
	13C7-PFUnDA	104%	120%	20-150%
	13C2-PFDoDA	93%	108%	20-150%
	13C2-PFTeDA	74%	88%	20-150%
	13C3-PFBS	110%	112%	20-150%
	13C3-PFHxS	114%	117%	20-150%
	13C8-PFOS	107%	117%	20-150%
	13C8-FOSA	89%	94%	20-150%
	d3-MeFOSA	95%	99%	20-150%
	d5-EtFOSA	93%	99%	20-150%
	d3-MeFOSAA	104%	108%	20-150%
	d5-EtFOSAA	109%	111%	20-150%
	d7-MeFOSE	73%	76%	20-150%
	d9-EtFOSE	70%	75%	20-150%
	13C2-4:2FTS	119%	156%*	20-150%
	13C2-6:2FTS	113%	110%	20-150%
	13C2-8:2FTS	108%	100%	20-150%
	13C3-HFPO-DA	95%	100%	20-150%

(a) Insufficient sample for re-extraction.

* = Outside of Control Limits.