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: FC1867

Sampling Dates: 01/10/23 - 01/11/23

Report to:

AECOM, Inc
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Denver, CO 80237
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ATTN: Katie Abbott

Total number of pages in report: 47

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

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Sample Summary

AECOM, INC.

Job No: FC1867

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FC1867-1	01/11/23	11:20	NT	01/12/23	AQ	Ground Water	AF-RHMW225401-WGN01B-2301W2
FC1867-2	01/10/23	10:10	NT	01/12/23	AQ	Ground Water	AF-RHMW12A-WGN01LF-2301W2
FC1867-3	01/10/23	10:10	NT	01/12/23	AQ	Ground Water	AF-RHMW12A-WGFD01LF-2301W2
FC1867-4	01/10/23	10:35	NT	01/12/23	AQ	Ground Water	AF-HDMW225303-WGN01LF-2301W2
FC1867-5	01/10/23	12:34	NT	01/12/23	AQ	Ground Water	AF-RHMW16-WGN01LF-2301W2
FC1867-6	01/10/23	13:15	NT	01/12/23	AQ	Ground Water	AF-RHMW10-WGN01LF-2301W2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job No:** FC1867

Site: N6274223F0104 RH Fire Suppression System **Report Date:** 1/18/2023 9:18:01 PM

On 01/12/2023, 6 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 3.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC1867 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:** OP94995

Sample(s) FC1745-2MS, FC1745-3DUP were used as the QC samples indicated.

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

Narrative prepared by:

_____

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

Summary of Hits

Job Number: FC1867
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 01/10/23 thru 01/11/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC1867-1	**AF-RHMW225401-WGN01B-2301W2**					
Perfluorohexanoic acid		1.0 J	4.7	0.94	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid		0.77 J	4.7	0.94	ng/l	EPA DRAFT 1633
Perfluorooctanoic acid		0.98 J	4.7	0.94	ng/l	EPA DRAFT 1633
Perfluorobutanesulfonic acid		0.68 J	4.7	0.94	ng/l	EPA DRAFT 1633
Perfluorohexanesulfonic acid		1.6 J	4.7	1.9	ng/l	EPA DRAFT 1633
Perfluorooctanesulfonic acid		1.1 J	4.7	1.9	ng/l	EPA DRAFT 1633
FC1867-2	**AF-RHMW12A-WGN01LF-2301W2**					
Perfluoropentanoic acid		4.6 J	8.9	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		1.2 J	4.5	0.89	ng/l	EPA DRAFT 1633
FC1867-3	**AF-RHMW12A-WGFD01LF-2301W2**					
Perfluoropentanoic acid		4.6 J	9.4	1.9	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		1.3 J	4.7	0.94	ng/l	EPA DRAFT 1633
FC1867-4	**AF-HDMW225303-WGN01LF-2301W2**					
No hits reported in this sample.						
FC1867-5	**AF-RHMW16-WGN01LF-2301W2**					
No hits reported in this sample.						
FC1867-6	**AF-RHMW10-WGN01LF-2301W2**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2301W2		
Lab Sample ID:	FC1867-1	**Date Sampled:**	01/11/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
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	6Q11532.D	1	01/18/23 01:36	MV	01/16/23 09:00	OP94995	S6Q180
Run #2							

	Initial Volume	Final Volume
Run #1	530 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	19	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	9.4	1.9	0.89	ng/l	
307-24-4	Perfluorohexanoic acid	1.0	4.7	0.94	0.47	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.77	4.7	0.94	0.47	ng/l	J
335-67-1	Perfluorooctanoic acid	0.98	4.7	0.94	0.47	ng/l	J
375-95-1	Perfluorononanoic acid	1.9 U	4.7	1.9	0.58	ng/l	
335-76-2	Perfluorodecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.7	1.9	0.79	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.68	4.7	0.94	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	1.6	4.7	1.9	0.66	ng/l	J
375-92-8	Perfluoroheptanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.1	4.7	1.9	0.51	ng/l	J
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.7	1.9	0.54	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.7	1.9	0.60	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.7	3.8	1.1	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.3	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.9	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.9 U	4.7	1.9	0.63	ng/l	
31506-32-8	MeFOSA	1.9 U	4.7	1.9	0.94	ng/l	
4151-50-2	EtFOSA	1.9 U	4.7	1.9	0.94	ng/l	

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

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2301W2		
Lab Sample ID:	FC1867-1	**Date Sampled:**	01/11/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE 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	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.4 U	47	9.4	4.1	ng/l	
1691-99-2	EtFOSE	19 U	47	19	7.0	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.8 U	19	3.8	0.94	ng/l	
919005-14-4	ADONA	3.8 U	19	3.8	1.8	ng/l	
377-73-1	PFMPA	1.9 U	9.4	1.9	0.94	ng/l	
863090-89-5	PFMBA	3.8 U	9.4	3.8	1.1	ng/l	
151772-58-6	NFDHA	3.8 U	9.4	3.8	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	19	3.8	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	19	3.8	1.7	ng/l	
113507-82-7	PFEESA	1.9 U	9.4	1.9	0.74	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.4 U	24	9.4	4.3	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	120	19	8.2	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	120	19	7.4	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	114%		20-150%
	13C5-PFPeA	118%		20-150%
	13C5-PFHxA	120%		20-150%
	13C4-PFHpA	122%		20-150%
	13C8-PFOA	115%		20-150%
	13C9-PFNA	112%		20-150%
	13C6-PFDA	129%		20-150%
	13C7-PFUnDA	119%		20-150%
	13C2-PFDoDA	102%		20-150%
	13C2-PFTeDA	87%		20-150%
	13C3-PFBS	105%		20-150%
	13C3-PFHxS	110%		20-150%

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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2301W2		
Lab Sample ID:	FC1867-1	**Date Sampled:**	01/11/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	112%		20-150%
	13C8-FOSA	109%		20-150%
	d3-MeFOSA	84%		20-150%
	d5-EtFOSA	80%		20-150%
	d3-MeFOSAA	104%		20-150%
	d5-EtFOSAA	100%		20-150%
	d7-MeFOSE	89%		20-150%
	d9-EtFOSE	91%		20-150%
	13C2-4:2FTS	117%		20-150%
	13C2-6:2FTS	121%		20-150%
	13C2-8:2FTS	114%		20-150%
	13C3-HFPO-DA	124%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2301W2		
Lab Sample ID:	FC1867-2	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
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	6Q11533.D	1	01/18/23 01:50	MV	01/16/23 09:00	OP94995	S6Q180
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	4.6	8.9	1.8	0.84	ng/l	J
307-24-4	Perfluorohexanoic acid	1.2	4.5	0.89	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.89 U	4.5	0.89	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	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	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-RHMW12A-WGN01LF-2301W2		
Lab Sample ID:	FC1867-2	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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	119%		20-150%
	13C5-PFPeA	119%		20-150%
	13C5-PFHxA	115%		20-150%
	13C4-PFHpA	122%		20-150%
	13C8-PFOA	108%		20-150%
	13C9-PFNA	114%		20-150%
	13C6-PFDA	114%		20-150%
	13C7-PFUnDA	99%		20-150%
	13C2-PFDoDA	100%		20-150%
	13C2-PFTeDA	90%		20-150%
	13C3-PFBS	108%		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-RHMW12A-WGN01LF-2301W2		
Lab Sample ID:	FC1867-2	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	103%		20-150%
	13C8-FOSA	109%		20-150%
	d3-MeFOSA	98%		20-150%
	d5-EtFOSA	91%		20-150%
	d3-MeFOSAA	108%		20-150%
	d5-EtFOSAA	101%		20-150%
	d7-MeFOSE	99%		20-150%
	d9-EtFOSE	99%		20-150%
	13C2-4:2FTS	128%		20-150%
	13C2-6:2FTS	123%		20-150%
	13C2-8:2FTS	111%		20-150%
	13C3-HFPO-DA	127%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGFD01LF-2301W2		
Lab Sample ID:	FC1867-3	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
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	6Q11534.D	1	01/18/23 02:04	MV	01/16/23 09:00	OP94995	S6Q180
Run #2							

	Initial Volume	Final Volume
Run #1	530 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	19	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	4.6	9.4	1.9	0.89	ng/l	J
307-24-4	Perfluorohexanoic acid	1.3	4.7	0.94	0.47	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
335-67-1	Perfluorooctanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	4.7	1.9	0.58	ng/l	
335-76-2	Perfluorodecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.7	1.9	0.79	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.7	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	4.7	1.9	0.66	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.7	1.9	0.51	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.7	1.9	0.54	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.7	1.9	0.60	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.7	3.8	1.1	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.3	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.9	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.9 U	4.7	1.9	0.63	ng/l	
31506-32-8	MeFOSA	1.9 U	4.7	1.9	0.94	ng/l	
4151-50-2	EtFOSA	1.9 U	4.7	1.9	0.94	ng/l	

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

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGFD01LF-2301W2		
Lab Sample ID:	FC1867-3	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE 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	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.4 U	47	9.4	4.1	ng/l	
1691-99-2	EtFOSE	19 U	47	19	7.0	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.8 U	19	3.8	0.94	ng/l	
919005-14-4	ADONA	3.8 U	19	3.8	1.8	ng/l	
377-73-1	PFMPA	1.9 U	9.4	1.9	0.94	ng/l	
863090-89-5	PFMBA	3.8 U	9.4	3.8	1.1	ng/l	
151772-58-6	NFDHA	3.8 U	9.4	3.8	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	19	3.8	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	19	3.8	1.7	ng/l	
113507-82-7	PFEESA	1.9 U	9.4	1.9	0.74	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.4 U	24	9.4	4.3	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	120	19	8.2	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	120	19	7.4	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	121%		20-150%
	13C5-PFPeA	122%		20-150%
	13C5-PFHxA	116%		20-150%
	13C4-PFHpA	120%		20-150%
	13C8-PFOA	108%		20-150%
	13C9-PFNA	113%		20-150%
	13C6-PFDA	115%		20-150%
	13C7-PFUnDA	101%		20-150%
	13C2-PFDoDA	89%		20-150%
	13C2-PFTeDA	70%		20-150%
	13C3-PFBS	107%		20-150%
	13C3-PFHxS	111%		20-150%

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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGFD01LF-2301W2		
Lab Sample ID:	FC1867-3	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	111%		20-150%
	13C8-FOSA	112%		20-150%
	d3-MeFOSA	99%		20-150%
	d5-EtFOSA	92%		20-150%
	d3-MeFOSAA	115%		20-150%
	d5-EtFOSAA	99%		20-150%
	d7-MeFOSE	98%		20-150%
	d9-EtFOSE	92%		20-150%
	13C2-4:2FTS	126%		20-150%
	13C2-6:2FTS	118%		20-150%
	13C2-8:2FTS	125%		20-150%
	13C3-HFPO-DA	122%		20-150%

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LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2301W2		
Lab Sample ID:	FC1867-4	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
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	6Q11535.D	1	01/18/23 02:18	MV	01/16/23 09:00	OP94995	S6Q180
Run #2							

	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	19	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	9.6	1.9	0.90	ng/l	
307-24-4	Perfluorohexanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
375-85-9	Perfluoroheptanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
335-67-1	Perfluorooctanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	4.8	1.9	0.59	ng/l	
335-76-2	Perfluorodecanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.8	1.9	0.58	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.8	1.9	0.58	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.8	1.9	0.81	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.96 U	4.8	0.96	0.48	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.96 U	4.8	0.96	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	4.8	1.9	0.67	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.96 U	4.8	0.96	0.48	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.8	1.9	0.52	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.8	1.9	0.55	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.8	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	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.9 U	4.8	1.9	0.64	ng/l	
31506-32-8	MeFOSA	1.9 U	4.8	1.9	0.96	ng/l	
4151-50-2	EtFOSA	1.9 U	4.8	1.9	0.96	ng/l	

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E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2301W2		
Lab Sample ID:	FC1867-4	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE 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	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.6 U	48	9.6	4.2	ng/l	
1691-99-2	EtFOSE	19 U	48	19	7.1	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.8 U	19	3.8	0.96	ng/l	
919005-14-4	ADONA	3.8 U	19	3.8	1.8	ng/l	
377-73-1	PFMPA	1.9 U	9.6	1.9	0.96	ng/l	
863090-89-5	PFMBA	3.8 U	9.6	3.8	1.1	ng/l	
151772-58-6	NFDHA	3.8 U	9.6	3.8	1.2	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	19	3.8	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	19	3.8	1.7	ng/l	
113507-82-7	PFEESA	1.9 U	9.6	1.9	0.75	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.6 U	24	9.6	4.3	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	120	19	8.4	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	120	19	7.5	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	121%		20-150%
	13C5-PFPeA	122%		20-150%
	13C5-PFHxA	121%		20-150%
	13C4-PFHpA	118%		20-150%
	13C8-PFOA	116%		20-150%
	13C9-PFNA	109%		20-150%
	13C6-PFDA	129%		20-150%
	13C7-PFUnDA	114%		20-150%
	13C2-PFDoDA	108%		20-150%
	13C2-PFTeDA	94%		20-150%
	13C3-PFBS	122%		20-150%
	13C3-PFHxS	123%		20-150%

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LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2301W2		
Lab Sample ID:	FC1867-4	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	120%		20-150%
	13C8-FOSA	114%		20-150%
	d3-MeFOSA	97%		20-150%
	d5-EtFOSA	101%		20-150%
	d3-MeFOSAA	114%		20-150%
	d5-EtFOSAA	110%		20-150%
	d7-MeFOSE	113%		20-150%
	d9-EtFOSE	106%		20-150%
	13C2-4:2FTS	138%		20-150%
	13C2-6:2FTS	134%		20-150%
	13C2-8:2FTS	143%		20-150%
	13C3-HFPO-DA	131%		20-150%

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LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
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Report of Analysis

Client Sample ID:	AF-RHMW16-WGN01LF-2301W2		
Lab Sample ID:	FC1867-5	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
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	6Q11536.D	1	01/18/23 02:32	MV	01/16/23 09:00	OP94995	S6Q180
Run #2							

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

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.5 U	18	3.5	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	8.8	1.8	0.82	ng/l	
307-24-4	Perfluorohexanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
375-85-9	Perfluoroheptanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
335-67-1	Perfluorooctanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	4.4	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	4.4	1.8	0.53	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	4.4	1.8	0.53	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	4.4	1.8	0.74	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.88 U	4.4	0.88	0.44	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.88 U	4.4	0.88	0.44	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.5 U	4.4	3.5	0.98	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	4.4	1.8	0.61	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.88 U	4.4	0.88	0.44	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	4.4	1.8	0.47	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	4.4	1.8	0.50	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	4.4	1.8	0.56	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.5 U	4.4	3.5	1.0	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.0 U	18	7.0	2.8	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.6	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.8 U	4.4	1.8	0.59	ng/l	
31506-32-8	MeFOSA	1.8 U	4.4	1.8	0.88	ng/l	
4151-50-2	EtFOSA	1.8 U	4.4	1.8	0.88	ng/l	

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Report of Analysis

Client Sample ID:	AF-RHMW16-WGN01LF-2301W2		
Lab Sample ID:	FC1867-5	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.5 U	4.4	3.5	0.88	ng/l	
2991-50-6	EtFOSAA	3.5 U	4.4	3.5	1.2	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	8.8 U	44	8.8	3.8	ng/l	
1691-99-2	EtFOSE	18 U	44	18	6.5	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.5 U	18	3.5	0.88	ng/l	
919005-14-4	ADONA	3.5 U	18	3.5	1.6	ng/l	
377-73-1	PFMPA	1.8 U	8.8	1.8	0.88	ng/l	
863090-89-5	PFMBA	3.5 U	8.8	3.5	1.0	ng/l	
151772-58-6	NFDHA	3.5 U	8.8	3.5	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.5 U	18	3.5	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.5 U	18	3.5	1.5	ng/l	
113507-82-7	PFEESA	1.8 U	8.8	1.8	0.68	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	8.8 U	22	8.8	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	110	18	7.7	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	110	18	6.9	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	119%		20-150%
	13C5-PFPeA	117%		20-150%
	13C5-PFHxA	111%		20-150%
	13C4-PFHpA	114%		20-150%
	13C8-PFOA	118%		20-150%
	13C9-PFNA	109%		20-150%
	13C6-PFDA	120%		20-150%
	13C7-PFUnDA	107%		20-150%
	13C2-PFDoDA	99%		20-150%
	13C2-PFTeDA	95%		20-150%
	13C3-PFBS	117%		20-150%
	13C3-PFHxS	125%		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-2301W2		
Lab Sample ID:	FC1867-5	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	108%		20-150%
	13C8-FOSA	108%		20-150%
	d3-MeFOSA	96%		20-150%
	d5-EtFOSA	93%		20-150%
	d3-MeFOSAA	98%		20-150%
	d5-EtFOSAA	105%		20-150%
	d7-MeFOSE	94%		20-150%
	d9-EtFOSE	96%		20-150%
	13C2-4:2FTS	140%		20-150%
	13C2-6:2FTS	136%		20-150%
	13C2-8:2FTS	130%		20-150%
	13C3-HFPO-DA	126%		20-150%

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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-RHMW10-WGN01LF-2301W2		
Lab Sample ID:	FC1867-6	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
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	6Q11537.D	1	01/18/23 02:46	MV	01/16/23 09:00	OP94995	S6Q180
Run #2							

	Initial Volume	Final Volume
Run #1	530 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	19	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	9.4	1.9	0.89	ng/l	
307-24-4	Perfluorohexanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
375-85-9	Perfluoroheptanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
335-67-1	Perfluorooctanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	4.7	1.9	0.58	ng/l	
335-76-2	Perfluorodecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	4.7	1.9	0.57	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	4.7	1.9	0.79	ng/l	
376-06-7	Perfluorotetradecanoic acid	0.94 U	4.7	0.94	0.47	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.7	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	4.7	1.9	0.66	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	0.94 U	4.7	0.94	0.47	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	4.7	1.9	0.51	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	4.7	1.9	0.54	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	4.7	1.9	0.60	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.7	3.8	1.1	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.3	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.9	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.9 U	4.7	1.9	0.63	ng/l	
31506-32-8	MeFOSA	1.9 U	4.7	1.9	0.94	ng/l	
4151-50-2	EtFOSA	1.9 U	4.7	1.9	0.94	ng/l	

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

Report of Analysis

Client Sample ID:	AF-RHMW10-WGN01LF-2301W2		
Lab Sample ID:	FC1867-6	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE 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	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	9.4 U	47	9.4	4.1	ng/l	
1691-99-2	EtFOSE	19 U	47	19	7.0	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	3.8 U	19	3.8	0.94	ng/l	
919005-14-4	ADONA	3.8 U	19	3.8	1.8	ng/l	
377-73-1	PFMPA	1.9 U	9.4	1.9	0.94	ng/l	
863090-89-5	PFMBA	3.8 U	9.4	3.8	1.1	ng/l	
151772-58-6	NFDHA	3.8 U	9.4	3.8	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.8 U	19	3.8	1.3	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.8 U	19	3.8	1.7	ng/l	
113507-82-7	PFEESA	1.9 U	9.4	1.9	0.74	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	9.4 U	24	9.4	4.3	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	19 U	120	19	8.2	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	19 U	120	19	7.4	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	124%		20-150%
	13C5-PFPeA	122%		20-150%
	13C5-PFHxA	123%		20-150%
	13C4-PFHpA	125%		20-150%
	13C8-PFOA	116%		20-150%
	13C9-PFNA	120%		20-150%
	13C6-PFDA	119%		20-150%
	13C7-PFUnDA	95%		20-150%
	13C2-PFDoDA	93%		20-150%
	13C2-PFTeDA	84%		20-150%
	13C3-PFBS	114%		20-150%
	13C3-PFHxS	116%		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-RHMW10-WGN01LF-2301W2		
Lab Sample ID:	FC1867-6	**Date Sampled:**	01/10/23
Matrix:	AQ - Ground Water	**Date Received:**	01/12/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	124%		20-150%
	13C8-FOSA	123%		20-150%
	d3-MeFOSA	106%		20-150%
	d5-EtFOSA	107%		20-150%
	d3-MeFOSAA	117%		20-150%
	d5-EtFOSAA	117%		20-150%
	d7-MeFOSE	100%		20-150%
	d9-EtFOSE	106%		20-150%
	13C2-4:2FTS	131%		20-150%
	13C2-6:2FTS	131%		20-150%
	13C2-8:2FTS	115%		20-150%
	13C3-HFPO-DA	131%		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

FC1867

SGS North America Inc - Orlando

Chain of Custody

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www.sgs.com

COC #: 2301W2AFSG07

SGS - ORLANDO JOB # :

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: NOAH TURNER **Sampler 2:**

Project Information

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

Analytical Information

PFAS EPA Draft 1633

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	CONTAINER INFORMATION TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	LAB USE ONLY
1	AF-RHMW225401-WGN01B-2301W2	01/11/23	1120	NT/KW/TN	GW	3		X								X

NT 01/11/2023

INITIAL ASSESSMENT ZB

LABEL VERIFICATION

Turnaround Time (Business days)

- 10 Day (Business)
- 7 Day
- [5 Day]
- 3 Day *RUSH*
- 2 Day *RUSH*
- 1 Day *RUSH*
- Other

Approved By: / Date:

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 016-82354775

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 NOAH TURNER / AECOM	01/11/23	2 AECOM	3 AECOM	1/11/23 1540	4 1/12/23 1600
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): 1.2 IR1

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FC1867

SGS - ORLANDO JOB # :

COC #: 2301W2AFSG05

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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: JVD JV CH 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	COLLECTION TIME	SAMPLED BY	MATRIX	CONTAINER INFORMATION: TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	MeOH+ZnAc	DI WATER	MECH	PFAS EPA Draft 1633	LAB USE ONLY
2	AF-RHMW12A-WGN01LF-2301W2	01/10/23	1010	JVD JV CH	GW	3		x								x	
3	AF-RHMW12A-WGFD01LF-2301W2	01/10/23	1015	JVD JV CH	GW	3		x								x	

01/10/23

01/10/23

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
016-
United AWB 85661111

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 JaeKlyn Vo AECOM	01/10/23 1350	2 AECOM	3 AECOM	1/10/23 1530	4 1/11/23 1600
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): 3.0/1

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Chain of Custody

FC1867

SGS - ORLANDO JOB #:

COC #: 2301W2AFSG04

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www.sgs.com

SGS - ORLANDO Quote #

SKIFF #

Client / Reporting Information	Project Information	Analytical Information	Matrix Codes
Company Name: AECOM	**Project Name:** N6274223F0104 RH Fire Suppression System		DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe
Address: 1001 Bishop St. ste 1600	**Street**		
City: Honolulu **State:** HI **Zip:** 96813	**City** Honolulu **State** Hawaii		
Project Contact: Katie Abbott **Email:** katie.abbott@aecom.com **Project Manager:** Watson Tanji **Email:** watson.tanji@aecom.com	**Project #** 60697810		
Phone #: 303-796-4624 / 808-954-4512	**Fax #**		
Sampler(s) Name(s) (Printed) **Sampler 1:** NOAH TURNER **Sampler 2:**	**Client Purchase Order #**		

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION: DATE	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
4	AF-HDMW225303-WGN01LF-2301W2	01/10/2023	1035	CW/NT/TN	GW	3		X								X	

8/10/23

8/10/23

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

016-
United AWB 85661111

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	/AECOM	01/10/23	2 AECOM	3 AECOM	01/10/23 1608	4 1/11/23 1600
5	Relinquished by/Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

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Chain of Custody

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SGS - ORLANDO JOB # :

COC #: 2301W2AFSG06
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: JVO JW CH 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	COLLECTION TIME	SAMPLED BY:	MATRIX	CONTAINER INFORMATION TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NACH+ZNAC	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
S	AF-RHMW16-WGN01LF-2301W2	01/10/23	1234	JVO JW CH	GW	3		x								x	

01/10/23

01/10/23

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
OIG-
United AWG 85661111

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	Jaylynn Vo AECOM	01/10/23 1350	2 AECOM	3 AECOM	1/10/23 1538	4 1/12/23 1600
	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

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FC1867: Chain of Custody
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Chain of Custody

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COC #: 2301W2AFSG03
SGS - ORLANDO JOB # :
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: NOAH TURNER 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	COLLECTION TIME	SAMPLED BY:	MATRIX	CONTAINER INFORMATION TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	PFAS EPA Draft 1633	LAB USE ONLY
6	AF-RHMW10-WGN01LF-2301W2	01/10/23	13:15	CW/TN/NT	GW	3		X								X	

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 016-85661111

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 AECOM	01/10/2023	2 AECOM	3 AECOM	1/10/23 1400	4 1/11/23 1600
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):

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FC1867: Chain of Custody
Page 5 of 6

SGS Sample Receipt Summary

Job Number: FC1867 **Client:** AECOM **Project:** N6274223F0104 RH Fire Suppression System

Date / Time Received: 1/12/2023 4:00:00 PM **Delivery Method:** United Cargo/Airspace **Airbill #'s:** United AWB #: 016-85661111 & 016-82354775

Therm ID: IR 1; **Therm CF:** 0.2; **# of Coolers:** 2

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0); Cooler 2: (1.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.2); Cooler 2: (1.4);

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 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments Samples shipped on Tuesday 01/10/23; United Cargo AWB #: 016-85661111 were Delayed and delivered on Thursday - 01/12/2023

SM001
Rev. Date 05/24/17

Technician: ZANEB Date: 1/12/2023 4:00:00 PM Reviewer: CD Date: 1/16/2023

QC Evaluation: DOD QSM5.x Limits

Job Number: FC1867
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 01/10/23 thru 01/11/23

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 FC1867

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: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q180-IBLK	6Q11517.D	1	01/17/23	MV	n/a	n/a	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

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: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q180-IBLK	6Q11517.D	1	01/17/23	MV	n/a	n/a	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

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	100%	20-150%
	13C5-PFPeA	106%	20-150%
	13C5-PFHxA	105%	20-150%
	13C4-PFHpA	108%	20-150%
	13C8-PFOA	95%	20-150%
	13C9-PFNA	106%	20-150%
	13C6-PFDA	100%	20-150%
	13C7-PFUnDA	101%	20-150%
	13C2-PFDoDA	102%	20-150%
	13C2-PFTeDA	96%	20-150%
	13C3-PFBS	102%	20-150%
	13C3-PFHxS	104%	20-150%
	13C8-PFOS	102%	20-150%
	13C8-FOSA	100%	20-150%
	d3-MeFOSA	98%	20-150%
	d5-EtFOSA	93%	20-150%
	d3-MeFOSAA	109%	20-150%
	d5-EtFOSAA	98%	20-150%
	d7-MeFOSE	93%	20-150%
	d9-EtFOSE	95%	20-150%
	13C2-4:2FTS	111%	20-150%
	13C2-6:2FTS	108%	20-150%
	13C2-8:2FTS	108%	20-150%
	13C3-HFPO-DA	107%	20-150%

Continuing Calibration Blank

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q180-ICCB	6Q11531.D	1	01/18/23	MV	n/a	n/a	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

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: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q180-ICCB	6Q11531.D	1	01/18/23	MV	n/a	n/a	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

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	100%	20-150%
	13C5-PFPeA	98%	20-150%
	13C5-PFHxA	95%	20-150%
	13C4-PFHpA	101%	20-150%
	13C8-PFOA	105%	20-150%
	13C9-PFNA	109%	20-150%
	13C6-PFDA	110%	20-150%
	13C7-PFUnDA	100%	20-150%
	13C2-PFDoDA	98%	20-150%
	13C2-PFTeDA	95%	20-150%
	13C3-PFBS	100%	20-150%
	13C3-PFHxS	108%	20-150%
	13C8-PFOS	108%	20-150%
	13C8-FOSA	105%	20-150%
	d3-MeFOSA	93%	20-150%
	d5-EtFOSA	96%	20-150%
	d3-MeFOSAA	102%	20-150%
	d5-EtFOSAA	103%	20-150%
	d7-MeFOSE	99%	20-150%
	d9-EtFOSE	95%	20-150%
	13C2-4:2FTS	113%	20-150%
	13C2-6:2FTS	125%	20-150%
	13C2-8:2FTS	121%	20-150%
	13C3-HFPO-DA	101%	20-150%

Method Blank Summary

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-MB	6Q11522.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

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: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-MB	6Q11522.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

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	114%	20-150%
	13C5-PFPeA	117%	20-150%
	13C5-PFHxA	117%	20-150%
	13C4-PFHpA	122%	20-150%
	13C8-PFOA	110%	20-150%
	13C9-PFNA	107%	20-150%
	13C6-PFDA	119%	20-150%
	13C7-PFUnDA	107%	20-150%
	13C2-PFDoDA	105%	20-150%
	13C2-PFTeDA	73%	20-150%
	13C3-PFBS	102%	20-150%
	13C3-PFHxS	113%	20-150%
	13C8-PFOS	106%	20-150%
	13C8-FOSA	102%	20-150%
	d3-MeFOSA	78%	20-150%
	d5-EtFOSA	78%	20-150%
	d3-MeFOSAA	104%	20-150%
	d5-EtFOSAA	96%	20-150%
	d7-MeFOSE	87%	20-150%
	d9-EtFOSE	85%	20-150%
	13C2-4:2FTS	119%	20-150%
	13C2-6:2FTS	129%	20-150%
	13C2-8:2FTS	118%	20-150%
	13C3-HFPO-DA	117%	20-150%

Blank Spike Summary

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-LLBS	6Q11521.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.04	0.0376	94	40-150
2706-90-3	Perfluoropentanoic acid	0.02	0.0193	97	40-150
307-24-4	Perfluorohexanoic acid	0.01	0.0088	88	40-150
375-85-9	Perfluoroheptanoic acid	0.01	0.0091	91	40-150
335-67-1	Perfluorooctanoic acid	0.01	0.0117	117	40-150
375-95-1	Perfluorononanoic acid	0.01	0.0101	101	40-150
335-76-2	Perfluorodecanoic acid	0.01	0.0086	86	40-150
2058-94-8	Perfluoroundecanoic acid	0.01	0.0091	91	40-150
307-55-1	Perfluorododecanoic acid	0.01	0.0091	91	40-150
72629-94-8	Perfluorotridecanoic acid	0.01	0.0091	91	40-150
376-06-7	Perfluorotetradecanoic acid	0.01	0.0096	96	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00887	0.0086	97	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00941	0.0084	89	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00914	0.0095	104	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00953	0.0097	102	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00928	0.0086	93	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00962	0.0092	96	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00965	0.0084	87	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0097	0.0083	86	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0375	0.0394	105	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.038	0.0319	84	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0384	0.0350	91	40-150
754-91-6	PFOSA	0.01	0.0092	92	40-150
31506-32-8	MeFOSA	0.01	0.0097	97	40-150
4151-50-2	EtFOSA	0.01	0.0094	94	40-150
2355-31-9	MeFOSAA	0.01	0.0102	102	40-150
2991-50-6	EtFOSAA	0.01	0.0079	79	40-150
24448-09-7	MeFOSE	0.1	0.0922	92	40-150
1691-99-2	EtFOSE	0.1	0.0922	92	40-150
13252-13-6	HFPO-DA (GenX)	0.04	0.0349	87	40-150
919005-14-4	ADONA	0.0378	0.0357	94	40-150
377-73-1	PFMPA	0.02	0.0185	93	40-150
863090-89-5	PFMBA	0.02	0.0184	92	40-150
151772-58-6	NFDHA	0.02	0.0196	98	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0374	0.0355	95	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0378	0.0349	92	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-LLBS	6Q11521.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0178	0.0173	97	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.05	0.0414	83	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.25	0.208	83	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.25	0.237	95	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	112%	20-150%
	13C5-PFPeA	118%	20-150%
	13C5-PFHxA	120%	20-150%
	13C4-PFHpA	120%	20-150%
	13C8-PFOA	114%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	106%	20-150%
	13C7-PFUnDA	99%	20-150%
	13C2-PFDoDA	98%	20-150%
	13C2-PFTeDA	82%	20-150%
	13C3-PFBS	101%	20-150%
	13C3-PFHxS	105%	20-150%
	13C8-PFOS	103%	20-150%
	13C8-FOSA	101%	20-150%
	d3-MeFOSA	84%	20-150%
	d5-EtFOSA	79%	20-150%
	d3-MeFOSAA	99%	20-150%
	d5-EtFOSAA	102%	20-150%
	d7-MeFOSE	85%	20-150%
	d9-EtFOSE	87%	20-150%
	13C2-4:2FTS	110%	20-150%
	13C2-6:2FTS	123%	20-150%
	13C2-8:2FTS	119%	20-150%
	13C3-HFPO-DA	123%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-BS	6Q11520.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0944	94	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0484	97	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0240	96	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0246	98	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0262	105	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0235	94	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0258	103	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0249	100	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0233	93	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0238	95	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0233	93	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0220	99	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0214	91	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0209	91	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0227	95	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0217	94	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0224	93	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0210	87	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0193	80	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0938	0.0928	99	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0860	91	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0998	104	40-150
754-91-6	PFOSA	0.025	0.0237	95	40-150
31506-32-8	MeFOSA	0.025	0.0232	93	40-150
4151-50-2	EtFOSA	0.025	0.0230	92	40-150
2355-31-9	MeFOSAA	0.025	0.0217	87	40-150
2991-50-6	EtFOSAA	0.025	0.0226	90	40-150
24448-09-7	MeFOSE	0.25	0.237	95	40-150
1691-99-2	EtFOSE	0.25	0.239	96	40-150
13252-13-6	HFPO-DA (GenX)	0.1	0.0911	91	40-150
919005-14-4	ADONA	0.0945	0.0893	94	40-150
377-73-1	PFMPA	0.05	0.0472	94	40-150
863090-89-5	PFMBA	0.05	0.0478	96	40-150
151772-58-6	NFDHA	0.05	0.0440	88	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0935	0.0880	94	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0945	0.0865	92	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-BS	6Q11520.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0437	98	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.110	88	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.625	0.576	92	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.650	104	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	112%	20-150%
	13C5-PFPeA	109%	20-150%
	13C5-PFHxA	107%	20-150%
	13C4-PFHpA	111%	20-150%
	13C8-PFOA	118%	20-150%
	13C9-PFNA	116%	20-150%
	13C6-PFDA	108%	20-150%
	13C7-PFUnDA	107%	20-150%
	13C2-PFDoDA	105%	20-150%
	13C2-PFTeDA	91%	20-150%
	13C3-PFBS	104%	20-150%
	13C3-PFHxS	114%	20-150%
	13C8-PFOS	112%	20-150%
	13C8-FOSA	112%	20-150%
	d3-MeFOSA	97%	20-150%
	d5-EtFOSA	92%	20-150%
	d3-MeFOSAA	111%	20-150%
	d5-EtFOSAA	109%	20-150%
	d7-MeFOSE	89%	20-150%
	d9-EtFOSE	87%	20-150%
	13C2-4:2FTS	120%	20-150%
	13C2-6:2FTS	129%	20-150%
	13C2-8:2FTS	113%	20-150%
	13C3-HFPO-DA	115%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-MS	6Q11525.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180
FC1745-2	6Q11524.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

CAS No.	Compound	FC1745-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.018	U	0.0877	0.0835	95	40-150
2706-90-3	Perfluoropentanoic acid	0.0088	U	0.0439	0.0425	97	40-150
307-24-4	Perfluorohexanoic acid	0.0044	U	0.0219	0.0211	96	40-150
375-85-9	Perfluoroheptanoic acid	0.0044	U	0.0219	0.0207	94	40-150
335-67-1	Perfluorooctanoic acid	0.0044	U	0.0219	0.0214	98	40-150
375-95-1	Perfluorononanoic acid	0.0044	U	0.0219	0.0207	94	40-150
335-76-2	Perfluorodecanoic acid	0.0044	U	0.0219	0.0210	96	40-150
2058-94-8	Perfluoroundecanoic acid	0.0044	U	0.0219	0.0211	96	40-150
307-55-1	Perfluorododecanoic acid	0.0044	U	0.0219	0.0210	96	40-150
72629-94-8	Perfluorotridecanoic acid	0.0044	U	0.0219	0.0206	94	40-150
376-06-7	Perfluorotetradecanoic acid	0.0044	U	0.0219	0.0233	106	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0044	U	0.0195	0.0198	102	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0044	U	0.0206	0.0199	96	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0044	U	0.02	0.0194	97	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0044	U	0.0209	0.0203	97	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0044	U	0.0204	0.0188	92	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0044	U	0.0211	0.0204	97	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0044	U	0.0212	0.0179	85	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0044	U	0.0213	0.0181	85	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.018	U	0.0822	0.0760	92	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U	0.0833	0.0798	96	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	0.0842	0.0935	111	40-150
754-91-6	PFOSA	0.0044	U	0.0219	0.0225	103	40-150
31506-32-8	MeFOSA	0.0044	U	0.0219	0.0193	88	40-150
4151-50-2	EtFOSA	0.0044	U	0.0219	0.0193	88	40-150
2355-31-9	MeFOSAA	0.0044	U	0.0219	0.0215	98	40-150
2991-50-6	EtFOSAA	0.0044	U	0.0219	0.0210	96	40-150
24448-09-7	MeFOSE	0.044	U	0.219	0.194	88	40-150
1691-99-2	EtFOSE	0.044	U	0.219	0.209	95	40-150
13252-13-6	HFPO-DA (GenX)	0.018	U	0.0877	0.0817	93	40-150
919005-14-4	ADONA	0.018	U	0.0829	0.0795	96	40-150
377-73-1	PFMPA	0.0088	U	0.0439	0.0418	95	40-150
863090-89-5	PFMBA	0.0088	U	0.0439	0.0425	97	40-150
151772-58-6	NFDHA	0.0088	U	0.0439	0.0417	95	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.018	U	0.082	0.0685	84	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.018	U	0.0829	0.0668	81	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-MS	6Q11525.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180
FC1745-2	6Q11524.D	1	01/17/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

CAS No.	Compound	FC1745-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0088	U	0.039	0.0362	93	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.022	U	0.11	0.0968	88	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.11	U	0.548	0.517	94	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.11	U	0.548	0.508	93	40-150

CAS No.	ID Standard Recoveries	MS	FC1745-2	Limits
	13C4-PFBA	115%	112%	20-150%
	13C5-PFPeA	116%	111%	20-150%
	13C5-PFHxA	117%	105%	20-150%
	13C4-PFHpA	117%	112%	20-150%
	13C8-PFOA	110%	111%	20-150%
	13C9-PFNA	107%	110%	20-150%
	13C6-PFDA	119%	111%	20-150%
	13C7-PFUnDA	107%	106%	20-150%
	13C2-PFDoDA	106%	99%	20-150%
	13C2-PFTeDA	93%	85%	20-150%
	13C3-PFBS	102%	108%	20-150%
	13C3-PFHxS	106%	111%	20-150%
	13C8-PFOS	109%	96%	20-150%
	13C8-FOSA	107%	107%	20-150%
	d3-MeFOSA	95%		20-150%
	d5-EtFOSA	91%		20-150%
	d3-MeFOSAA	108%	107%	20-150%
	d5-EtFOSAA	103%	104%	20-150%
	d7-MeFOSE	99%		20-150%
	d9-EtFOSE	92%		20-150%
	13C2-4:2FTS	121%	131%	20-150%
	13C2-6:2FTS	117%	126%	20-150%
	13C2-8:2FTS	99%	115%	20-150%
	13C3-HFPO-DA	124%		20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-DUP	6Q11527.D	1	01/18/23	MV	01/16/23	OP94995	S6Q180
FC1745-3	6Q11526.D	1	01/18/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

CAS No.	Compound	FC1745-3 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	0.0088 U		ND		nc	30
307-24-4	Perfluorohexanoic acid	0.0044 U		ND		nc	30
375-85-9	Perfluoroheptanoic acid	0.0044 U		ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0044 U		ND		nc	30
375-95-1	Perfluorononanoic acid	0.0044 U		ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0044 U		ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0044 U		ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0044 U		ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0044 U		ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0044 U		ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0044 U		ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0044 U		ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0044 U		ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0044 U		ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0044 U		ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0044 U		ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0044 U		ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0044 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	0.0044 U		ND		nc	30
31506-32-8	MeFOSA	0.0044 U		ND		nc	30
4151-50-2	EtFOSA	0.0044 U		ND		nc	30
2355-31-9	MeFOSAA	0.0044 U		ND		nc	30
2991-50-6	EtFOSAA	0.0044 U		ND		nc	30
24448-09-7	MeFOSE	0.044 U		ND		nc	30
1691-99-2	EtFOSE	0.044 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	0.0088 U		ND		nc	30
863090-89-5	PFMBA	0.0088 U		ND		nc	30
151772-58-6	NFDHA	0.0088 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: FC1867
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP94995-DUP	6Q11527.D	1	01/18/23	MV	01/16/23	OP94995	S6Q180
FC1745-3	6Q11526.D	1	01/18/23	MV	01/16/23	OP94995	S6Q180

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

FC1867-1, FC1867-2, FC1867-3, FC1867-4, FC1867-5, FC1867-6

CAS No.	Compound	FC1745-3 ug/l	Q	DUP ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0088	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	FC1745-3	Limits
	13C4-PFBA	109%	118%	20-150%
	13C5-PFPeA	117%	116%	20-150%
	13C5-PFHxA	118%	112%	20-150%
	13C4-PFHpA	114%	111%	20-150%
	13C8-PFOA	101%	115%	20-150%
	13C9-PFNA	107%	107%	20-150%
	13C6-PFDA	109%	105%	20-150%
	13C7-PFUnDA	92%	111%	20-150%
	13C2-PFDoDA	92%	103%	20-150%
	13C2-PFTeDA	91%	97%	20-150%
	13C3-PFBS	105%	110%	20-150%
	13C3-PFHxS	106%	113%	20-150%
	13C8-PFOS	98%	111%	20-150%
	13C8-FOSA	102%	115%	20-150%
	d3-MeFOSA	81%		20-150%
	d5-EtFOSA	79%		20-150%
	d3-MeFOSAA	96%	110%	20-150%
	d5-EtFOSAA	91%	106%	20-150%
	d7-MeFOSE	85%		20-150%
	d9-EtFOSE	85%		20-150%
	13C2-4:2FTS	116%	133%	20-150%
	13C2-6:2FTS	115%	136%	20-150%
	13C2-8:2FTS	106%	118%	20-150%
	13C3-HFPO-DA	123%		20-150%

* = Outside of Control Limits.