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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC5968

Sampling Date: 05/09/23



Report to:

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Total number of pages in report: 45



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

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Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
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Test results relate only to samples analyzed.

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Sample Summary

AECOM, INC.

Job No: FC5968

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC5968-1	05/09/23	10:11 JV	05/10/23	AQ	Ground Water	AF-HDMW225303-WGN01LF-2305W2
FC5968-2	05/09/23	10:15 AA	05/10/23	AQ	Ground Water	AF-RHMW12A-WGN01LF-2305W2
FC5968-3	05/09/23	10:15 AA	05/10/23	AQ	Ground Water	AF-RHMW12A-WGFD01LF-2305W2
FC5968-4	05/09/23	12:20 RSJV	05/10/23	AQ	Ground Water	AF-RHMW10-WGN01LF-2305W2
FC5968-5	05/09/23	13:05 AAAY	05/10/23	AQ	Ground Water	AF-RHMW16-WGN01LF-2305W2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC.

Job No: FC5968

Site: N6274223F0104 RH Fire Suppression System

Report Date: 5/17/2023 11:53:07 AM

On 05/10/2023, 5 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 2.9 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC5968 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: OP96871

Sample(s) FC5968-2MS, FC5968-3DUP 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: FC5968
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 05/09/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FC5968-1 AF-HDMW225303-WGN01LF-2305W2

No hits reported in this sample.

FC5968-2 AF-RHMW12A-WGN01LF-2305W2

Perfluoropentanoic acid	3.2 J	7.3	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid	0.89 J	3.6	1.8	ng/l	EPA DRAFT 1633

FC5968-3 AF-RHMW12A-WGFD01LF-2305W2

Perfluoropentanoic acid	3.3 J	7.1	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid	1.0 J	3.6	1.8	ng/l	EPA DRAFT 1633

FC5968-4 AF-RHMW10-WGN01LF-2305W2

No hits reported in this sample.

FC5968-5 AF-RHMW16-WGN01LF-2305W2

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2305W2		
Lab Sample ID:	FC5968-1	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q17832.D	1	05/16/23 02:03	MV	05/12/23 11:00	OP96871	S6Q269
Run #2							

Run #	Initial Volume	Final Volume
Run #1	550 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	3.6 U	15	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	7.3	1.8	0.85	ng/l	
307-24-4	Perfluorohexanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
375-85-9	Perfluoroheptanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.91 U	3.6	0.91	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.6	1.8	0.76	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.6 U	4.5	3.6	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	3.6	1.8	0.64	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.6	1.8	0.49	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.6	1.8	0.52	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.6	1.8	0.58	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.6 U	4.5	3.6	1.0	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.3 U	18	7.3	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.7	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.8 U	3.6	1.8	0.61	ng/l	
31506-32-8	MeFOSA	3.6 U	7.3	3.6	0.91	ng/l	
4151-50-2	EtFOSA	3.6 U	7.3	3.6	0.91	ng/l	

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

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2305W2		
Lab Sample ID:	FC5968-1	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.91	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	18 U	36	18	4.0	ng/l	
1691-99-2	EtFOSE	18 U	36	18	6.7	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	107%		20-150%
	13C5-PFPeA	109%		20-150%
	13C5-PFHxA	119%		20-150%
	13C4-PFHpA	105%		20-150%
	13C8-PFOA	107%		20-150%
	13C9-PFNA	104%		20-150%
	13C6-PFDA	113%		20-150%
	13C7-PFUnDA	108%		20-150%
	13C2-PFDoDA	90%		20-150%
	13C2-PFTeDA	88%		20-150%
	13C3-PFBS	111%		20-150%
	13C3-PFHxS	103%		20-150%

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

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2305W2		
Lab Sample ID:	FC5968-1	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	93%		20-150%
	13C8-FOSA	64%		20-150%
	d3-MeFOSA	67%		20-150%
	d5-EtFOSA	71%		20-150%
	d3-MeFOSAA	85%		20-150%
	d5-EtFOSAA	86%		20-150%
	d7-MeFOSE	67%		20-150%
	d9-EtFOSE	79%		20-150%
	13C2-4:2FTS	102%		20-180%
	13C2-6:2FTS	108%		20-180%
	13C2-8:2FTS	104%		20-180%
	13C3-HFPO-DA	102%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2305W2		
Lab Sample ID:	FC5968-2	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q17835.D	1	05/16/23 02:46	MV	05/12/23 11:00	OP96871	S6Q269
Run #2							

Run #	Initial Volume	Final Volume
Run #1	550 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	3.6 U	15	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	3.2	7.3	1.8	0.85	ng/l	J
307-24-4	Perfluorohexanoic acid	0.89	3.6	1.8	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.91 U	3.6	0.91	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.6	1.8	0.76	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.6 U	4.5	3.6	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	3.6	1.8	0.64	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.6	1.8	0.49	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.6	1.8	0.52	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.6	1.8	0.58	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.6 U	4.5	3.6	1.0	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.3 U	18	7.3	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.7	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.8 U	3.6	1.8	0.61	ng/l	
31506-32-8	MeFOSA	3.6 U	7.3	3.6	0.91	ng/l	
4151-50-2	EtFOSA	3.6 U	7.3	3.6	0.91	ng/l	

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

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Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2305W2		
Lab Sample ID:	FC5968-2	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.91	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	18 U	36	18	4.0	ng/l	
1691-99-2	EtFOSE	18 U	36	18	6.7	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	64%		20-150%
	13C5-PFPeA	110%		20-150%
	13C5-PFHxA	118%		20-150%
	13C4-PFHpA	108%		20-150%
	13C8-PFOA	113%		20-150%
	13C9-PFNA	121%		20-150%
	13C6-PFDA	116%		20-150%
	13C7-PFUnDA	101%		20-150%
	13C2-PFDoDA	97%		20-150%
	13C2-PFTeDA	91%		20-150%
	13C3-PFBS	118%		20-150%
	13C3-PFHxS	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-RHMW12A-WGN01LF-2305W2		
Lab Sample ID:	FC5968-2	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
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	94%		20-150%
	d3-MeFOSA	90%		20-150%
	d5-EtFOSA	90%		20-150%
	d3-MeFOSAA	98%		20-150%
	d5-EtFOSAA	97%		20-150%
	d7-MeFOSE	91%		20-150%
	d9-EtFOSE	99%		20-150%
	13C2-4:2FTS	103%		20-180%
	13C2-6:2FTS	114%		20-180%
	13C2-8:2FTS	95%		20-180%
	13C3-HFPO-DA	114%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGFD01LF-2305W2		
Lab Sample ID:	FC5968-3	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q17837.D	1	05/16/23 03:15	MV	05/12/23 11:00	OP96871	S6Q269
Run #2							

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

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	3.6 U	14	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	3.3	7.1	1.8	0.84	ng/l	J
307-24-4	Perfluorohexanoic acid	1.0	3.6	1.8	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.89 U	3.6	0.89	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.6	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.6	1.8	0.54	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.6	1.8	0.54	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.6	1.8	0.75	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.6 U	4.5	3.6	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	3.6	1.8	0.62	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.6	1.8	0.48	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.6	1.8	0.51	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.6	1.8	0.57	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.6 U	4.5	3.6	1.0	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.1 U	18	7.1	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.1 U	18	7.1	3.1	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.1 U	18	7.1	3.7	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

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

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

4.3
4

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGFD01LF-2305W2		
Lab Sample ID:	FC5968-3	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.89	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	18 U	36	18	3.9	ng/l	
1691-99-2	EtFOSE	18 U	36	18	6.6	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	64%		20-150%
	13C5-PFPeA	109%		20-150%
	13C5-PFHxA	110%		20-150%
	13C4-PFHpA	106%		20-150%
	13C8-PFOA	109%		20-150%
	13C9-PFNA	110%		20-150%
	13C6-PFDA	121%		20-150%
	13C7-PFUnDA	107%		20-150%
	13C2-PFDoDA	94%		20-150%
	13C2-PFTeDA	87%		20-150%
	13C3-PFBS	128%		20-150%
	13C3-PFHxS	115%		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-2305W2	
Lab Sample ID:	FC5968-3	Date Sampled: 05/09/23
Matrix:	AQ - Ground Water	Date Received: 05/10/23
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	102%		20-150%
	13C8-FOSA	90%		20-150%
	d3-MeFOSA	89%		20-150%
	d5-EtFOSA	83%		20-150%
	d3-MeFOSAA	83%		20-150%
	d5-EtFOSAA	91%		20-150%
	d7-MeFOSE	88%		20-150%
	d9-EtFOSE	94%		20-150%
	13C2-4:2FTS	112%		20-180%
	13C2-6:2FTS	126%		20-180%
	13C2-8:2FTS	108%		20-180%
	13C3-HFPO-DA	101%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW10-WGN01LF-2305W2		
Lab Sample ID:	FC5968-4	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q17839.D	1	05/16/23 03:44	MV	05/12/23 11:00	OP96871	S6Q269
Run #2							

Run #	Initial Volume	Final Volume
Run #1	550 ml	5.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	3.6 U	15	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	7.3	1.8	0.85	ng/l	
307-24-4	Perfluorohexanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
375-85-9	Perfluoroheptanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
335-67-1	Perfluorooctanoic acid	0.91 U	3.6	0.91	0.45	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.6	1.8	0.55	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.6	1.8	0.76	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.6	1.8	0.45	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.6 U	4.5	3.6	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	3.6	1.8	0.64	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.6	1.8	0.45	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.6	1.8	0.49	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.6	1.8	0.52	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.6	1.8	0.58	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.6 U	4.5	3.6	1.0	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.3 U	18	7.3	2.9	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.2	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.3 U	18	7.3	3.7	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.8 U	3.6	1.8	0.61	ng/l	
31506-32-8	MeFOSA	3.6 U	7.3	3.6	0.91	ng/l	
4151-50-2	EtFOSA	3.6 U	7.3	3.6	0.91	ng/l	

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

4.4
4

Report of Analysis

Client Sample ID:	AF-RHMW10-WGN01LF-2305W2		Date Sampled:	05/09/23
Lab Sample ID:	FC5968-4	Date Received:	05/10/23	
Matrix:	AQ - Ground Water	Percent Solids:	n/a	
Method:	EPA DRAFT 1633 EPA 1633 DRAFT			
Project:	N6274223F0104 RH Fire Suppression System			

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

2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.91	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	18 U	36	18	4.0	ng/l	
1691-99-2	EtFOSE	18 U	36	18	6.7	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	108%		20-150%
	13C5-PFPeA	106%		20-150%
	13C5-PFHxA	110%		20-150%
	13C4-PFHpA	102%		20-150%
	13C8-PFOA	109%		20-150%
	13C9-PFNA	100%		20-150%
	13C6-PFDA	107%		20-150%
	13C7-PFUnDA	102%		20-150%
	13C2-PFDoDA	82%		20-150%
	13C2-PFTeDA	91%		20-150%
	13C3-PFBS	118%		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-RHMW10-WGN01LF-2305W2	
Lab Sample ID:	FC5968-4	Date Sampled: 05/09/23
Matrix:	AQ - Ground Water	Date Received: 05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	93%		20-150%
	13C8-FOSA	83%		20-150%
	d3-MeFOSA	77%		20-150%
	d5-EtFOSA	79%		20-150%
	d3-MeFOSAA	77%		20-150%
	d5-EtFOSAA	89%		20-150%
	d7-MeFOSE	81%		20-150%
	d9-EtFOSE	87%		20-150%
	13C2-4:2FTS	112%		20-180%
	13C2-6:2FTS	103%		20-180%
	13C2-8:2FTS	97%		20-180%
	13C3-HFPO-DA	104%		20-150%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AF-RHMW16-WGN01LF-2305W2		
Lab Sample ID:	FC5968-5	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q17840.D	1	05/16/23 03:59	MV	05/12/23 11:00	OP96871	S6Q269
Run #2							

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

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
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PERFLUOROALKYL CARBOXYLIC ACIDS

375-22-4	Perfluorobutanoic acid	3.8 U	15	3.8	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	7.5	1.9	0.89	ng/l	
307-24-4	Perfluorohexanoic acid	1.9 U	3.8	1.9	0.47	ng/l	
375-85-9	Perfluoroheptanoic acid	1.9 U	3.8	1.9	0.47	ng/l	
335-67-1	Perfluorooctanoic acid	0.94 U	3.8	0.94	0.47	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	3.8	1.9	0.58	ng/l	
335-76-2	Perfluorodecanoic acid	1.9 U	3.8	1.9	0.47	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	3.8	1.9	0.57	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	3.8	1.9	0.57	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	3.8	1.9	0.79	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.9 U	3.8	1.9	0.47	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

375-73-5	Perfluorobutanesulfonic acid	1.9 U	3.8	1.9	0.47	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.8 U	4.7	3.8	1.1	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.9 U	3.8	1.9	0.66	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.9 U	3.8	1.9	0.47	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.9 U	3.8	1.9	0.51	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.9 U	3.8	1.9	0.54	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.9 U	3.8	1.9	0.60	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.8 U	4.7	3.8	1.1	ng/l	

FLUOROTELOMER SULFONIC ACIDS

757124-72-4	4:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.0	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.3	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.5 U	19	7.5	3.9	ng/l	

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	3.8	1.9	0.63	ng/l	
31506-32-8	MeFOSA	3.8 U	7.5	3.8	0.94	ng/l	
4151-50-2	EtFOSA	3.8 U	7.5	3.8	0.94	ng/l	

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

4.5
4

Report of Analysis

Client Sample ID:	AF-RHMW16-WGN01LF-2305W2		
Lab Sample ID:	FC5968-5	Date Sampled:	05/09/23
Matrix:	AQ - Ground Water	Date Received:	05/10/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids:	n/a
Project:	N6274223F0104 RH Fire Suppression System		

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

2355-31-9	MeFOSAA	3.8 U	4.7	3.8	0.94	ng/l	
2991-50-6	EtFOSAA	3.8 U	4.7	3.8	1.3	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

24448-09-7	MeFOSE	19 U	38	19	4.1	ng/l	
1691-99-2	EtFOSE	19 U	38	19	7.0	ng/l	

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	91%		20-150%
	13C5-PFPeA	106%		20-150%
	13C5-PFHxA	109%		20-150%
	13C4-PFHpA	109%		20-150%
	13C8-PFOA	112%		20-150%
	13C9-PFNA	103%		20-150%
	13C6-PFDA	117%		20-150%
	13C7-PFUnDA	101%		20-150%
	13C2-PFDoDA	88%		20-150%
	13C2-PFTeDA	90%		20-150%
	13C3-PFBS	107%		20-150%
	13C3-PFHxS	96%		20-150%

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

4.5
4

Report of Analysis

Client Sample ID:	AF-RHMW16-WGN01LF-2305W2	
Lab Sample ID:	FC5968-5	Date Sampled: 05/09/23
Matrix:	AQ - Ground Water	Date Received: 05/10/23
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	101%		20-150%
	13C8-FOSA	89%		20-150%
	d3-MeFOSA	85%		20-150%
	d5-EtFOSA	87%		20-150%
	d3-MeFOSAA	91%		20-150%
	d5-EtFOSAA	90%		20-150%
	d7-MeFOSE	86%		20-150%
	d9-EtFOSE	94%		20-150%
	13C2-4:2FTS	103%		20-180%
	13C2-6:2FTS	103%		20-180%
	13C2-8:2FTS	92%		20-180%
	13C3-HFPO-DA	105%		20-150%

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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



SGS North America Inc - Orlando
Chain of Custody

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

FC5968
SGS - ORLANDO JOB # :

COC #: 2305W2AFSG04
PAGE 1 OF 1

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes				
Company Name: AECOM		Project Name: N6274223F0104 RH Fire Suppression System		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">PFAS EPA Draft 1633</div> <div style="text-align: right;"> <p>Ag 05/04/23</p> <p>INITIAL ASSESSMENT</p> <p>LABEL VERIFICATION</p> </div> </div>										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 # 80697810																
Project Manager: Watson Tanji Email: watson.tanji@aecom.com		Fax #																
Sampler(s) Name(s) (Printed)		Client Purchase Order #																
Sampler 1:		Sampler 2:																
SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION			CONTAINER INFORMATION										LAB USE ONLY			
		DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NOPE	PC	NECH	INCH	RECH	NACH-ZNAC	DI WATER		NECH		
1	AF-HDMW225303-WGN01LF-2305W2	5/4/23	1011	JV	GW	3		X										
Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks														
10 Day (Business) 7 Day <input checked="" type="checkbox"/> 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other		Approved By: / Date: 		<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4) <input checked="" type="checkbox"/> EDD'S										EDMS upload database: JBPHE EDMS Coverage: AFFF Assessment Sampling GW United RMB 016-97071982				
Rush T/A Data Available VIA Email or Lablink																		
Sample Custody must be documented below each time samples change possession, including courier delivery.																		
Relinquished by/Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation				
1	5/4/23 1240	2 Brittany Tominez / AECOM	3 Brittany Tominez / AECOM	5/7/23 1930	4 [Signature] / AECOM	5		6			7			8				
Lab Use Only : Cooler Temperature (s) Celsius (corrected): 3.025													http://www.sgs.com/en/terms-and-conditions					

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SGS North America Inc - Orlando
Chain of Custody

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FC5968

SGS - ORLANDO JOB #:

COC #: 2305W2AFSG03

PAGE 1 OF 1

Client / Reporting Information			Project Information			Analytical Information												Matrix Codes					
Company Name: AECOM			Project Name: N6274223F0104 RH Fire Suppression System			<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">PFAS EPA Draft 1633</div> <div style="border: 1px solid black; padding: 5px; font-size: 2em; font-weight: bold; margin-right: 10px;">AS</div> <div style="font-size: 1.2em;">05/09/23</div> </div>												DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OJ - 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 Phone #: 303-796-4624 / 808-954-4512			Project # 60697810 Fax #																				
Sampler(s) Name(s) (Printed) Sampler 1: Sampler 2:			Client Purchase Order #																				
SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION			CONTAINER INFORMATION												LAB USE ONLY						
		DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	ICI	NACH	PANGS	PERCA	NACH-ZNAC	DI WATER	MECH								
4	AF-RHMW10-WGN01LF-2305W2	5/9/23	1220	AS JV	GW	3		X															
Turnaround Time (Business days)			Data Deliverable Information			Comments / Remarks																	
10 Day (Business) Approved By: / Date: 7 Day <input checked="" type="checkbox"/> 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other			<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4) <input checked="" type="checkbox"/> EDD'S			EDMS upload database: JBPHE EDMS Coverage: AFFF Assessment Sampling GW W-12-AWS-012-97077982																	
Rush T/A Data Available VIA Email or Lablink																							
Sample Custody must be documented below each time samples change possession, including courier delivery.																							
Relinquished by Sampler/Affiliation 1 Ryan Ommasta		Date Time: 5/5/23 13:00		Received By/Affiliation 2 Brittany Tommer / AECOM		Relinquished By/Affiliation 3 Brittany Tommer / AECOM		Date Time: 5/9/23		Received By/Affiliation 4 [Signature] / SLD 1576		Relinquished by/Affiliation 5		Date Time:		Received By/Affiliation 6		Relinquished By/Affiliation 7		Date Time:		Received By/Affiliation 8	
Lab Use Only : Cooler Temperature (s) Celsius (corrected):																							
http://www.sgs.com/en/terms-and-conditions																							

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Chain of Custody

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FC5968

SGS - ORLANDO JOB # :

COC #: 2305W2AFSG06
PAGE 1 OF 1

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes				
Company Name: AECOM		Project Name: N6274223F0104 RH Fire Suppression System		<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small; margin-right: 5px;">PFAS EPA Draft 1633</div> <div style="border: 1px solid black; padding: 10px; text-align: center;"> </div> </div>										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 # 60697810																
Project Manager: Watson Tanji Email: watson.tanji@aecom.com		Fax #																
Sampler(s) Name(s) (Printed) Sampler 1: <i>Alex Edmonds</i> Sampler 2: <i>Andy Young</i>		Client Purchase Order #																
SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION			CONTAINER INFORMATION										LAB USE ONLY			
		DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	ICI	NACH	INCH3	PSECH	NACH-ZNAC	DI WATER		WEDH		
5	AF-RHMW16-WGN01LF-2305W2	5/19/23	1305	AA, AY	GW	3		X										
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks										
10 Day (Business) 7 Day <input checked="" type="checkbox"/> 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other		Approved By: / Date:		<input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input checked="" type="checkbox"/> FULLT1 (EPA LEVEL 4) <input checked="" type="checkbox"/> EDD'S				EDMS upload database: JBPHE EDMS Coverage: AFFF Assessment Sampling GW <i>United number 316 37077982</i>										
Rush T/A Data Available VIA Email or Lablink												Sample Custody must be documented below each time samples change possession, including courier delivery.						
Relinquished by Sampler/Affiliation		Date Time:		Received By/Affiliation		Date Time:		Relinquished By/Affiliation		Date Time:		Received By/Affiliation						
1 <i>Andy Young / AECOM</i>		5/19/23		2 <i>Alex Edmonds AECOM</i>		5/19/23		3 <i>Alex Edmonds AECOM</i>		5/19/23		4 <i>[Signature] 5/19/23</i>						
5				6				7				8						
Lab Use Only : Cooler Temperature (s) Celsius (corrected):												http://www.sgs.com/en/terms-and-conditions						

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SGS Sample Receipt Summary

Job Number: FC5968

Client: AECOM

Project: N6274223F0104 RH Fire Suppression System

Date / Time Received: 5/10/2023 9:30:00 AM

Delivery Method: United Cargo/Airspace

Airbill #'s: United Cargo AWB #: 016-97077982

Therm ID: IR 1;

Therm CF: -0.1;

of Coolers: 1

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

Cooler Temps (Corrected) °C: Cooler 1: (2.9);

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: 5/10/2023 9:30:00 AM

Reviewer: CD

Date: 5/15/2023

FC5968: Chain of Custody

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QC Evaluation: DOD QSM5.x Limits

Job Number: FC5968
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 05/09/23

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

* Sample used for QC is not from job FC5968

5.2
5

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Instrument Blank

Job Number: FC5968
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q269-IBLK	6Q17784.D	1	05/15/23	MV	n/a	n/a	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q269-IBLK	6Q17784.D	1	05/15/23	MV	n/a	n/a	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	101% 20-150%
	13C5-PFHxA	104% 20-150%
	13C4-PFHpA	102% 20-150%
	13C8-PFOA	100% 20-150%
	13C9-PFNA	98% 20-150%
	13C6-PFDA	102% 20-150%
	13C7-PFUnDA	94% 20-150%
	13C2-PFDoDA	92% 20-150%
	13C2-PFTeDA	91% 20-150%
	13C3-PFBS	101% 20-150%
	13C3-PFHxS	101% 20-150%
	13C8-PFOS	99% 20-150%
	13C8-FOSA	98% 20-150%
	d3-MeFOSA	98% 20-150%
	d5-EtFOSA	99% 20-150%
	d3-MeFOSAA	77% 20-150%
	d5-EtFOSAA	79% 20-150%
	d7-MeFOSE	112% 20-150%
	d9-EtFOSE	120% 20-150%
	13C2-4:2FTS	99% 20-180%
	13C2-6:2FTS	91% 20-180%
	13C2-8:2FTS	89% 20-180%
	13C3-HFPO-DA	102% 20-150%

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Continuing Calibration Blank

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q269-ICCB	6Q17822.D	1	05/15/23	MV	n/a	n/a	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q269-ICCB	6Q17822.D	1	05/15/23	MV	n/a	n/a	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	98% 20-150%
	13C5-PFHxA	99% 20-150%
	13C4-PFHpA	101% 20-150%
	13C8-PFOA	105% 20-150%
	13C9-PFNA	100% 20-150%
	13C6-PFDA	111% 20-150%
	13C7-PFUnDA	107% 20-150%
	13C2-PFDoDA	104% 20-150%
	13C2-PFTeDA	99% 20-150%
	13C3-PFBS	113% 20-150%
	13C3-PFHxS	104% 20-150%
	13C8-PFOS	100% 20-150%
	13C8-FOSA	102% 20-150%
	d3-MeFOSA	91% 20-150%
	d5-EtFOSA	92% 20-150%
	d3-MeFOSAA	88% 20-150%
	d5-EtFOSAA	92% 20-150%
	d7-MeFOSE	113% 20-150%
	d9-EtFOSE	108% 20-150%
	13C2-4:2FTS	109% 20-180%
	13C2-6:2FTS	103% 20-180%
	13C2-8:2FTS	104% 20-180%
	13C3-HFPO-DA	98% 20-150%

Continuing Calibration Blank

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q269-ICCB	6Q17834.D	1	05/16/23	MV	n/a	n/a	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q269-ICCB	6Q17834.D	1	05/16/23	MV	n/a	n/a	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-2, FC5968-3, FC5968-4, FC5968-5

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	99% 20-150%
	13C5-PFPeA	96% 20-150%
	13C5-PFHxA	96% 20-150%
	13C4-PFHpA	103% 20-150%
	13C8-PFOA	96% 20-150%
	13C9-PFNA	100% 20-150%
	13C6-PFDA	113% 20-150%
	13C7-PFUnDA	105% 20-150%
	13C2-PFDoDA	100% 20-150%
	13C2-PFTeDA	98% 20-150%
	13C3-PFBS	95% 20-150%
	13C3-PFHxS	99% 20-150%
	13C8-PFOS	94% 20-150%
	13C8-FOSA	99% 20-150%
	d3-MeFOSA	87% 20-150%
	d5-EtFOSA	91% 20-150%
	d3-MeFOSAA	89% 20-150%
	d5-EtFOSAA	96% 20-150%
	d7-MeFOSE	103% 20-150%
	d9-EtFOSE	106% 20-150%
	13C2-4:2FTS	94% 20-180%
	13C2-6:2FTS	94% 20-180%
	13C2-8:2FTS	87% 20-180%
	13C3-HFPO-DA	97% 20-150%

Method Blank Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-MB	6Q17825.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	Result	RL	MDL	Units	Q
375-22-4	Perfluorobutanoic acid	ND	0.016	0.0019	ug/l	
2706-90-3	Perfluoropentanoic acid	ND	0.0080	0.00094	ug/l	
307-24-4	Perfluorohexanoic acid	ND	0.0040	0.00050	ug/l	
375-85-9	Perfluoroheptanoic acid	ND	0.0040	0.00050	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.0040	0.00050	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.0040	0.00061	ug/l	
335-76-2	Perfluorodecanoic acid	ND	0.0040	0.00050	ug/l	
2058-94-8	Perfluoroundecanoic acid	ND	0.0040	0.00060	ug/l	
307-55-1	Perfluorododecanoic acid	ND	0.0040	0.00060	ug/l	
72629-94-8	Perfluorotridecanoic acid	ND	0.0040	0.00084	ug/l	
376-06-7	Perfluorotetradecanoic acid	ND	0.0040	0.00050	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.0040	0.00050	ug/l	
2706-91-4	Perfluoropentanesulfonic acid	ND	0.0050	0.0011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.0040	0.00070	ug/l	
375-92-8	Perfluoroheptanesulfonic acid	ND	0.0040	0.00050	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.0040	0.00054	ug/l	
68259-12-1	Perfluorononanesulfonic acid	ND	0.0040	0.00057	ug/l	
335-77-3	Perfluorodecanesulfonic acid	ND	0.0040	0.00064	ug/l	
79780-39-5	Perfluorododecanesulfonic aci	ND	0.0050	0.0011	ug/l	
757124-72-44:2	Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	0.00067	ug/l	
31506-32-8	MeFOSA	ND	0.0080	0.0010	ug/l	
4151-50-2	EtFOSA	ND	0.0080	0.0010	ug/l	
2355-31-9	MeFOSAA	ND	0.0050	0.0010	ug/l	
2991-50-6	EtFOSAA	ND	0.0050	0.0013	ug/l	
24448-09-7	MeFOSE	ND	0.040	0.0044	ug/l	
1691-99-2	EtFOSE	ND	0.040	0.0074	ug/l	
13252-13-6	HFPO-DA (GenX)	ND	0.0040	0.0010	ug/l	
919005-14-4	ADONA	ND	0.0080	0.0019	ug/l	
377-73-1	PFMPA	ND	0.0080	0.0010	ug/l	
863090-89-5	PFMBA	ND	0.0080	0.0011	ug/l	
151772-58-6	NFDHA	ND	0.0080	0.0012	ug/l	
756426-58-19	Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-91	Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Method Blank Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-MB	6Q17825.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	103% 20-150%
	13C5-PFPeA	100% 20-150%
	13C5-PFHxA	102% 20-150%
	13C4-PFHpA	97% 20-150%
	13C8-PFOA	110% 20-150%
	13C9-PFNA	113% 20-150%
	13C6-PFDA	109% 20-150%
	13C7-PFUnDA	103% 20-150%
	13C2-PFDoDA	79% 20-150%
	13C2-PFTeDA	77% 20-150%
	13C3-PFBS	113% 20-150%
	13C3-PFHxS	109% 20-150%
	13C8-PFOS	98% 20-150%
	13C8-FOSA	73% 20-150%
	d3-MeFOSA	66% 20-150%
	d5-EtFOSA	64% 20-150%
	d3-MeFOSAA	84% 20-150%
	d5-EtFOSAA	83% 20-150%
	d7-MeFOSE	64% 20-150%
	d9-EtFOSE	75% 20-150%
	13C2-4:2FTS	104% 20-180%
	13C2-6:2FTS	104% 20-180%
	13C2-8:2FTS	100% 20-180%
	13C3-HFPO-DA	96% 20-150%

Blank Spike Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-LLBS	6Q17824.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0283	94	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0137	91	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0069	92	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0067	89	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0070	93	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0079	105	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0063	84	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0061	81	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0067	89	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0065	87	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0066	88	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0061	92	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0070	99	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0069	101	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0064	90	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0062	89	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0059	82	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0064	88	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0057	78	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0266	95	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0255	89	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0242	84	40-150
754-91-6	PFOSA	0.0075	0.0072	96	40-150
31506-32-8	MeFOSA	0.015	0.0131	87	40-150
4151-50-2	EtFOSA	0.015	0.0134	89	40-150
2355-31-9	MeFOSAA	0.0075	0.0074	99	40-150
2991-50-6	EtFOSAA	0.0075	0.0066	88	40-150
24448-09-7	MeFOSE	0.0375	0.0352	94	40-150
1691-99-2	EtFOSE	0.0375	0.0346	92	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0142	95	40-150
919005-14-4	ADONA	0.0142	0.0131	92	40-150
377-73-1	PFMPA	0.015	0.0142	95	40-150
863090-89-5	PFMBA	0.015	0.0146	97	40-150
151772-58-6	NFDHA	0.015	0.0133	89	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.014	0.0129	92	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0142	0.0127	90	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-LLBS	6Q17824.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0112	84	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0270	72	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.153	82	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.161	86	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	110%	20-150%
	13C5-PFPeA	109%	20-150%
	13C5-PFHxA	120%	20-150%
	13C4-PFHpA	110%	20-150%
	13C8-PFOA	108%	20-150%
	13C9-PFNA	99%	20-150%
	13C6-PFDA	121%	20-150%
	13C7-PFUnDA	121%	20-150%
	13C2-PFDoDA	105%	20-150%
	13C2-PFTeDA	99%	20-150%
	13C3-PFBS	116%	20-150%
	13C3-PFHxS	111%	20-150%
	13C8-PFOS	118%	20-150%
	13C8-FOSA	85%	20-150%
	d3-MeFOSA	83%	20-150%
	d5-EtFOSA	88%	20-150%
	d3-MeFOSAA	95%	20-150%
	d5-EtFOSAA	97%	20-150%
	d7-MeFOSE	83%	20-150%
	d9-EtFOSE	94%	20-150%
	13C2-4:2FTS	112%	20-180%
	13C2-6:2FTS	111%	20-180%
	13C2-8:2FTS	114%	20-180%
	13C3-HFPO-DA	105%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-BS	6Q17823.D	1	05/15/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.0948	95	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0465	93	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0230	92	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0243	97	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0236	94	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0250	100	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0228	91	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0235	94	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0253	101	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0242	97	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0252	101	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0207	93	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0237	101	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0237	104	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0234	98	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0222	96	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0237	99	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0220	91	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0201	83	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.0805	86	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.0990	104	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0770	80	40-150
754-91-6	PFOSA	0.025	0.0243	97	40-150
31506-32-8	MeFOSA	0.05	0.0466	93	40-150
4151-50-2	EtFOSA	0.05	0.0476	95	40-150
2355-31-9	MeFOSAA	0.025	0.0217	87	40-150
2991-50-6	EtFOSAA	0.025	0.0229	92	40-150
24448-09-7	MeFOSE	0.125	0.115	92	40-150
1691-99-2	EtFOSE	0.125	0.111	89	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0494	99	40-150
919005-14-4	ADONA	0.0473	0.0478	101	40-150
377-73-1	PFMPA	0.05	0.0478	96	40-150
863090-89-5	PFMBA	0.05	0.0483	97	40-150
151772-58-6	NFDHA	0.05	0.0509	102	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0467	100	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0418	88	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-BS	6Q17823.D	1	05/15/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0387	87	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0890	71	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.561	90	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.605	97	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	106%	20-150%
	13C5-PFPeA	105%	20-150%
	13C5-PFHxA	107%	20-150%
	13C4-PFHpA	104%	20-150%
	13C8-PFOA	104%	20-150%
	13C9-PFNA	109%	20-150%
	13C6-PFDA	100%	20-150%
	13C7-PFUnDA	96%	20-150%
	13C2-PFDoDA	86%	20-150%
	13C2-PFTeDA	80%	20-150%
	13C3-PFBS	112%	20-150%
	13C3-PFHxS	102%	20-150%
	13C8-PFOS	105%	20-150%
	13C8-FOSA	78%	20-150%
	d3-MeFOSA	72%	20-150%
	d5-EtFOSA	75%	20-150%
	d3-MeFOSAA	92%	20-150%
	d5-EtFOSAA	85%	20-150%
	d7-MeFOSE	75%	20-150%
	d9-EtFOSE	84%	20-150%
	13C2-4:2FTS	109%	20-180%
	13C2-6:2FTS	99%	20-180%
	13C2-8:2FTS	114%	20-180%
	13C3-HFPO-DA	99%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-MS	6Q17836.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269
FC5968-2	6Q17835.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	FC5968-2 ug/l	Spike Q	MS ug/l	MS %	Limits	
375-22-4	Perfluorobutanoic acid	0.015 U		0.0943	0.0913	97	40-150
2706-90-3	Perfluoropentanoic acid	0.0032 J		0.0472	0.0486	96	40-150
307-24-4	Perfluorohexanoic acid	0.00089 J		0.0236	0.0245	100	40-150
375-85-9	Perfluoroheptanoic acid	0.0036 U		0.0236	0.0226	96	40-150
335-67-1	Perfluorooctanoic acid	0.0036 U		0.0236	0.0229	97	40-150
375-95-1	Perfluorononanoic acid	0.0036 U		0.0236	0.0234	99	40-150
335-76-2	Perfluorodecanoic acid	0.0036 U		0.0236	0.0222	94	40-150
2058-94-8	Perfluoroundecanoic acid	0.0036 U		0.0236	0.0222	94	40-150
307-55-1	Perfluorododecanoic acid	0.0036 U		0.0236	0.0215	91	40-150
72629-94-8	Perfluorotridecanoic acid	0.0036 U		0.0236	0.0236	100	40-150
376-06-7	Perfluorotetradecanoic acid	0.0036 U		0.0236	0.0237	100	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0036 U		0.0209	0.0201	96	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0045 U		0.0222	0.0226	102	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0036 U		0.0216	0.0220	102	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0036 U		0.0225	0.0224	100	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0036 U		0.0219	0.0223	102	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0036 U		0.0227	0.0227	100	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0036 U		0.0228	0.0212	93	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0045 U		0.0229	0.0217	95	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.018 U		0.0884	0.0869	98	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018 U		0.0896	0.0973	109	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U		0.0906	0.0970	107	40-150
754-91-6	PFOSA	0.0036 U		0.0236	0.0234	99	40-150
31506-32-8	MeFOSA	0.0073 U		0.0472	0.0450	95	40-150
4151-50-2	EtFOSA	0.0073 U		0.0472	0.0462	98	40-150
2355-31-9	MeFOSAA	0.0045 U		0.0236	0.0231	98	40-150
2991-50-6	EtFOSAA	0.0045 U		0.0236	0.0223	95	40-150
24448-09-7	MeFOSE	0.036 U		0.118	0.106	90	40-150
1691-99-2	EtFOSE	0.036 U		0.118	0.113	96	40-150
13252-13-6	HFPO-DA (GenX)	0.0036 U		0.0472	0.0476	101	40-150
919005-14-4	ADONA	0.0073 U		0.0446	0.0435	98	40-150
377-73-1	PFMPA	0.0073 U		0.0472	0.0433	92	40-150
863090-89-5	PFMBA	0.0073 U		0.0472	0.0464	98	40-150
151772-58-6	NFDHA	0.0073 U		0.0472	0.0437	93	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0073 U		0.0441	0.0365	83	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0073 U		0.0446	0.0339	76	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-MS	6Q17836.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269
FC5968-2	6Q17835.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	FC5968-2 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0073 U	0.042	0.0376	90	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.018 U	0.118	0.0753	64	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.091 U	0.59	0.504	85	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.091 U	0.59	0.527	89	40-150

CAS No.	ID Standard Recoveries	MS	FC5968-2	Limits
	13C4-PFBA	64%	64%	20-150%
	13C5-PFPeA	107%	110%	20-150%
	13C5-PFHxA	114%	118%	20-150%
	13C4-PFHpA	108%	108%	20-150%
	13C8-PFOA	102%	113%	20-150%
	13C9-PFNA	100%	121%	20-150%
	13C6-PFDA	105%	116%	20-150%
	13C7-PFUnDA	98%	101%	20-150%
	13C2-PFDoDA	90%	97%	20-150%
	13C2-PFTeDA	90%	91%	20-150%
	13C3-PFBS	118%	118%	20-150%
	13C3-PFHxS	111%	108%	20-150%
	13C8-PFOS	90%	103%	20-150%
	13C8-FOSA	90%	94%	20-150%
	d3-MeFOSA	82%	90%	20-150%
	d5-EtFOSA	78%	90%	20-150%
	d3-MeFOSAA	82%	98%	20-150%
	d5-EtFOSAA	82%	97%	20-150%
	d7-MeFOSE	86%	91%	20-150%
	d9-EtFOSE	90%	99%	20-150%
	13C2-4:2FTS	111%	103%	20-180%
	13C2-6:2FTS	99%	114%	20-180%
	13C2-8:2FTS	89%	95%	20-180%
	13C3-HFPO-DA	104%	114%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-DUP	6Q17838.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269
FC5968-3	6Q17837.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	FC5968-3 ug/l	DUP Q	ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.014 U		ND		nc	30
2706-90-3	Perfluoropentanoic acid	0.0033 J		0.0035 J		6	30
307-24-4	Perfluorohexanoic acid	0.0010 J		0.0011 J		10	30
375-85-9	Perfluoroheptanoic acid	0.0036 U		ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0036 U		ND		nc	30
375-95-1	Perfluorononanoic acid	0.0036 U		ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0036 U		ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0036 U		ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0036 U		ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0036 U		ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0036 U		ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0036 U		ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0045 U		ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0036 U		ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0036 U		ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0036 U		ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0036 U		ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0036 U		ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0045 U		ND		nc	30
757124-72-44:2	Fluorotelomer sulfonate	0.018 U		ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.018 U		ND		nc	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U		ND		nc	30
754-91-6	PFOSA	0.0036 U		ND		nc	30
31506-32-8	MeFOSA	0.0071 U		ND		nc	30
4151-50-2	EtFOSA	0.0071 U		ND		nc	30
2355-31-9	MeFOSAA	0.0045 U		ND		nc	30
2991-50-6	EtFOSAA	0.0045 U		ND		nc	30
24448-09-7	MeFOSE	0.036 U		ND		nc	30
1691-99-2	EtFOSE	0.036 U		ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.0036 U		ND		nc	30
919005-14-4	ADONA	0.0071 U		ND		nc	30
377-73-1	PFMPA	0.0071 U		ND		nc	30
863090-89-5	PFMBA	0.0071 U		ND		nc	30
151772-58-6	NFDHA	0.0071 U		ND		nc	30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0071 U		ND		nc	30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0071 U		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC5968
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP96871-DUP	6Q17838.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269
FC5968-3	6Q17837.D	1	05/16/23	MV	05/12/23	OP96871	S6Q269

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC5968-1, FC5968-2, FC5968-3, FC5968-4, FC5968-5

CAS No.	Compound	FC5968-3 ug/l	DUP Q	ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0071	U	ND		nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.018	U	ND		nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.089	U	ND		nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.089	U	ND		nc	30

CAS No.	ID Standard Recoveries	DUP	FC5968-3	Limits
	13C4-PFBA	55%	64%	20-150%
	13C5-PFPeA	104%	109%	20-150%
	13C5-PFHxA	106%	110%	20-150%
	13C4-PFHpA	101%	106%	20-150%
	13C8-PFOA	105%	109%	20-150%
	13C9-PFNA	93%	110%	20-150%
	13C6-PFDA	95%	121%	20-150%
	13C7-PFUnDA	90%	107%	20-150%
	13C2-PFDoDA	80%	94%	20-150%
	13C2-PFTeDA	81%	87%	20-150%
	13C3-PFBS	118%	128%	20-150%
	13C3-PFHxS	106%	115%	20-150%
	13C8-PFOS	92%	102%	20-150%
	13C8-FOSA	82%	90%	20-150%
	d3-MeFOSA	75%	89%	20-150%
	d5-EtFOSA	79%	83%	20-150%
	d3-MeFOSAA	80%	83%	20-150%
	d5-EtFOSAA	84%	91%	20-150%
	d7-MeFOSE	81%	88%	20-150%
	d9-EtFOSE	82%	94%	20-150%
	13C2-4:2FTS	109%	112%	20-180%
	13C2-6:2FTS	100%	126%	20-180%
	13C2-8:2FTS	98%	108%	20-180%
	13C3-HFPO-DA	100%	101%	20-150%

* = Outside of Control Limits.