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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC6537

Sampling Date: 05/31/23



Report to:

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Total number of pages in report: 51



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)
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Test results relate only to samples analyzed.

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Sample Summary

AECOM, INC.

Job No: FC6537

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FC6537-1	05/31/23	09:20	EMZD 06/01/23	AQ	Ground Water	AF-RHMW12A-WGN01LF-2305W5
FC6537-2	05/31/23	09:20	EMZD 06/01/23	AQ	Ground Water	AF-RHMW12A-WGFD01LF-2305W5
FC6537-3	05/31/23	09:55	ALCP 06/01/23	AQ	Ground Water	AF-RHMW04-WGN01LF-2305W5
FC6537-4	05/31/23	11:40	ALCP 06/01/23	AQ	Ground Water	AF-RHMW06-WGN01LF-2305W5
FC6537-5	05/31/23	12:10	EMZD 06/01/23	AQ	Ground Water	AF-RHMW16-WGN01LF-2305W5

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC.

Job No: FC6537

Site: N6274223F0104 RH Fire Suppression System

Report Date: 6/9/2023 2:51:18 PM

On 06/01/2023, 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 2.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC6537 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: OP97216

Sample(s) FC6537-2MS, FC6537-3DUP 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: FC6537
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 05/31/23



Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
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FC6537-1 AF-RHMW12A-WGN01LF-2305W5

Perfluoropentanoic acid	3.3 J	7.1	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid	0.78 J	3.6	1.8	ng/l	EPA DRAFT 1633

FC6537-2 AF-RHMW12A-WGFD01LF-2305W5

Perfluoropentanoic acid	2.7 J	7.3	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid	0.87 J	3.6	1.8	ng/l	EPA DRAFT 1633

FC6537-3 AF-RHMW04-WGN01LF-2305W5

No hits reported in this sample.

FC6537-4 AF-RHMW06-WGN01LF-2305W5

No hits reported in this sample.

FC6537-5 AF-RHMW16-WGN01LF-2305W5

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2305W5		
Lab Sample ID:	FC6537-1	Date Sampled:	05/31/23
Matrix:	AQ - Ground Water	Date Received:	06/01/23
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	6Q18998.D	1	06/08/23 03:05	MV	06/06/23 11:00	OP97216	S6Q283
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	0.78	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

4.1
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Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2305W5		
Lab Sample ID:	FC6537-1	Date Sampled:	05/31/23
Matrix:	AQ - Ground Water	Date Received:	06/01/23
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
	13C4-PFBA	67%		20-150%
	13C5-PFPeA	111%		20-150%
	13C5-PFHxA	108%		20-150%
	13C4-PFHpA	109%		20-150%
	13C8-PFOA	116%		20-150%
	13C9-PFNA	109%		20-150%
	13C6-PFDA	108%		20-150%
	13C7-PFUnDA	100%		20-150%
	13C2-PFDoDA	89%		20-150%
	13C2-PFTeDA	85%		20-150%
	13C3-PFBS	118%		20-150%
	13C3-PFHxS	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

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Report of Analysis

Client Sample ID:	AF-RHMW12A-WGN01LF-2305W5	
Lab Sample ID:	FC6537-1	Date Sampled: 05/31/23
Matrix:	AQ - Ground Water	Date Received: 06/01/23
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	91%		20-150%
	d3-MeFOSA	92%		20-150%
	d5-EtFOSA	94%		20-150%
	d3-MeFOSAA	103%		20-150%
	d5-EtFOSAA	99%		20-150%
	d7-MeFOSE	84%		20-150%
	d9-EtFOSE	94%		20-150%
	13C2-4:2FTS	125%		20-180%
	13C2-6:2FTS	133%		20-180%
	13C2-8:2FTS	117%		20-180%
	13C3-HFPO-DA	119%		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-2305W5		
Lab Sample ID:	FC6537-2	Date Sampled:	05/31/23
Matrix:	AQ - Ground Water	Date Received:	06/01/23
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	6Q18999.D	1	06/08/23 03:19	MV	06/06/23 11:00	OP97216	S6Q283
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	2.7	7.3	1.8	0.85	ng/l	J
307-24-4	Perfluorohexanoic acid	0.87	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

4.2
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Report of Analysis

Client Sample ID:	AF-RHMW12A-WGFD01LF-2305W5		
Lab Sample ID:	FC6537-2	Date Sampled:	05/31/23
Matrix:	AQ - Ground Water	Date Received:	06/01/23
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	63%		20-150%
	13C5-PFPeA	108%		20-150%
	13C5-PFHxA	104%		20-150%
	13C4-PFHpA	107%		20-150%
	13C8-PFOA	102%		20-150%
	13C9-PFNA	104%		20-150%
	13C6-PFDA	90%		20-150%
	13C7-PFUnDA	88%		20-150%
	13C2-PFDoDA	81%		20-150%
	13C2-PFTeDA	80%		20-150%
	13C3-PFBS	109%		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-WGFD01LF-2305W5	
Lab Sample ID:	FC6537-2	Date Sampled: 05/31/23
Matrix:	AQ - Ground Water	Date Received: 06/01/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	97%		20-150%
	13C8-FOSA	98%		20-150%
	d3-MeFOSA	97%		20-150%
	d5-EtFOSA	101%		20-150%
	d3-MeFOSAA	113%		20-150%
	d5-EtFOSAA	108%		20-150%
	d7-MeFOSE	88%		20-150%
	d9-EtFOSE	95%		20-150%
	13C2-4:2FTS	118%		20-180%
	13C2-6:2FTS	124%		20-180%
	13C2-8:2FTS	100%		20-180%
	13C3-HFPO-DA	112%		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-RHMW04-WGN01LF-2305W5		
Lab Sample ID:	FC6537-3	Date Sampled:	05/31/23
Matrix:	AQ - Ground Water	Date Received:	06/01/23
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	6Q19001.D	1	06/08/23 03:48	MV	06/06/23 11:00	OP97216	S6Q283
Run #2							

Run #	Initial Volume	Final Volume
Run #1	540 ml	5.0 ml
Run #2		

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

375-22-4	Perfluorobutanoic acid	3.7 U	15	3.7	1.8	ng/l	
2706-90-3	Perfluoropentanoic acid	1.9 U	7.4	1.9	0.87	ng/l	
307-24-4	Perfluorohexanoic acid	1.9 U	3.7	1.9	0.46	ng/l	
375-85-9	Perfluoroheptanoic acid	1.9 U	3.7	1.9	0.46	ng/l	
335-67-1	Perfluorooctanoic acid	0.93 U	3.7	0.93	0.46	ng/l	
375-95-1	Perfluorononanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
335-76-2	Perfluorodecanoic acid	1.9 U	3.7	1.9	0.46	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
307-55-1	Perfluorododecanoic acid	1.9 U	3.7	1.9	0.56	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.9 U	3.7	1.9	0.78	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.9 U	3.7	1.9	0.46	ng/l	

PERFLUOROALKYL SULFONIC ACIDS

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

FLUOROTELOMER SULFONIC ACIDS

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

PERFLUOROOCCTANE SULFONAMIDES

754-91-6	PFOSA	1.9 U	3.7	1.9	0.62	ng/l	
31506-32-8	MeFOSA	3.7 U	7.4	3.7	0.93	ng/l	
4151-50-2	EtFOSA	3.7 U	7.4	3.7	0.93	ng/l	

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

Report of Analysis

Client Sample ID:	AF-RHMW04-WGN01LF-2305W5	
Lab Sample ID:	FC6537-3	Date Sampled: 05/31/23
Matrix:	AQ - Ground Water	Date Received: 06/01/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

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

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

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

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

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
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	13C4-PFBA	108%		20-150%
	13C5-PFPeA	110%		20-150%
	13C5-PFHxA	105%		20-150%
	13C4-PFHpA	109%		20-150%
	13C8-PFOA	108%		20-150%
	13C9-PFNA	102%		20-150%
	13C6-PFDA	103%		20-150%
	13C7-PFUnDA	92%		20-150%
	13C2-PFDoDA	87%		20-150%
	13C2-PFTeDA	88%		20-150%
	13C3-PFBS	109%		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-RHMW04-WGN01LF-2305W5	
Lab Sample ID:	FC6537-3	Date Sampled: 05/31/23
Matrix:	AQ - Ground Water	Date Received: 06/01/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	105%		20-150%
	13C8-FOSA	102%		20-150%
	d3-MeFOSA	97%		20-150%
	d5-EtFOSA	106%		20-150%
	d3-MeFOSAA	115%		20-150%
	d5-EtFOSAA	115%		20-150%
	d7-MeFOSE	93%		20-150%
	d9-EtFOSE	105%		20-150%
	13C2-4:2FTS	115%		20-180%
	13C2-6:2FTS	125%		20-180%
	13C2-8:2FTS	109%		20-180%
	13C3-HFPO-DA	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-RHMW06-WGN01LF-2305W5		
Lab Sample ID:	FC6537-4	Date Sampled:	05/31/23
Matrix:	AQ - Ground Water	Date Received:	06/01/23
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	6Q19003.D	1	06/08/23 04:17	MV	06/06/23 11:00	OP97216	S6Q283
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

PERFLUOROALKYL CARBOXYLIC ACIDS

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

PERFLUOROALKYL SULFONIC ACIDS

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

FLUOROTELOMER SULFONIC ACIDS

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

PERFLUOROOCCTANE SULFONAMIDES

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

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

4.4
4

Report of Analysis

Client Sample ID:	AF-RHMW06-WGN01LF-2305W5		Date Sampled:	05/31/23
Lab Sample ID:	FC6537-4	Date Received:	06/01/23	
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	0.89	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	

PERFLUOROOCCTANE SULFONAMIDO ETHANOLS

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

PER and POLYFLUOROETHER CARBOXYLIC ACIDS

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

PER and POLYFLUOROETHER SULFONIC ACIDS

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

FLUOROTELOMER CARBOXYLIC ACIDS

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

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	105%		20-150%
	13C5-PFPeA	106%		20-150%
	13C5-PFHxA	102%		20-150%
	13C4-PFHpA	105%		20-150%
	13C8-PFOA	101%		20-150%
	13C9-PFNA	106%		20-150%
	13C6-PFDA	94%		20-150%
	13C7-PFUnDA	87%		20-150%
	13C2-PFDoDA	81%		20-150%
	13C2-PFTeDA	77%		20-150%
	13C3-PFBS	107%		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

4.4
4

Report of Analysis

Client Sample ID:	AF-RHMW06-WGN01LF-2305W5	
Lab Sample ID:	FC6537-4	Date Sampled: 05/31/23
Matrix:	AQ - Ground Water	Date Received: 06/01/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	Percent Solids: n/a
Project:	N6274223F0104 RH Fire Suppression System	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C8-PFOS	96%		20-150%
	13C8-FOSA	88%		20-150%
	d3-MeFOSA	85%		20-150%
	d5-EtFOSA	87%		20-150%
	d3-MeFOSAA	109%		20-150%
	d5-EtFOSAA	102%		20-150%
	d7-MeFOSE	84%		20-150%
	d9-EtFOSE	92%		20-150%
	13C2-4:2FTS	117%		20-180%
	13C2-6:2FTS	115%		20-180%
	13C2-8:2FTS	111%		20-180%
	13C3-HFPO-DA	112%		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-2305W5		
Lab Sample ID:	FC6537-5	Date Sampled:	05/31/23
Matrix:	AQ - Ground Water	Date Received:	06/01/23
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	6Q19006.D	1	06/08/23 05:01	MV	06/06/23 11:00	OP97216	S6Q283
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

4.5
4

Report of Analysis

Client Sample ID:	AF-RHMW16-WGN01LF-2305W5		
Lab Sample ID:	FC6537-5	Date Sampled:	05/31/23
Matrix:	AQ - Ground Water	Date Received:	06/01/23
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	94%		20-150%
	13C5-PFPeA	110%		20-150%
	13C5-PFHxA	109%		20-150%
	13C4-PFHpA	108%		20-150%
	13C8-PFOA	108%		20-150%
	13C9-PFNA	103%		20-150%
	13C6-PFDA	99%		20-150%
	13C7-PFUnDA	90%		20-150%
	13C2-PFDoDA	81%		20-150%
	13C2-PFTeDA	82%		20-150%
	13C3-PFBS	107%		20-150%
	13C3-PFHxS	110%		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-2305W5	
Lab Sample ID:	FC6537-5	Date Sampled: 05/31/23
Matrix:	AQ - Ground Water	Date Received: 06/01/23
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	101%		20-150%
	d3-MeFOSA	106%		20-150%
	d5-EtFOSA	105%		20-150%
	d3-MeFOSAA	122%		20-150%
	d5-EtFOSAA	116%		20-150%
	d7-MeFOSE	97%		20-150%
	d9-EtFOSE	104%		20-150%
	13C2-4:2FTS	121%		20-180%
	13C2-6:2FTS	124%		20-180%
	13C2-8:2FTS	109%		20-180%
	13C3-HFPO-DA	118%		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

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www.sgs.com

COC #: 2305W5AFSG09

SGS - ORLANDO JOB # :

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SGS - ORLANDO Quote #

SKIFF #

FC6537

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 OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe	
Address: 1001 Bishop St. ste 1600			Street														
City: Honolulu		State: HI	Zip: 96813		City: Honolulu												State: Hawaii
Project Contact: Katie Abbott Project Manager: Watson Tanji Phone #: 303-796-4624 / 808-954-4512			Project # 60697810														
Email: katie.abbott@aecom.com Email: watson.tanji@aecom.com			Fax #														
Sampler(s) Name(s) (Printed) Sampler 1: Anthony L. Sampler 2: Cristan P.			Client Purchase Order #			PFAS EPA Draft 1633										LAB USE ONLY	
SGS Orlando Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NOISE	PCB	NaOH	ANCS	RESCA	NaOH/NaAC	DI WATER	RECH		
4	AF-RHMW06-WGN01LF-2305W5	5/31/23	1140	CP	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 AWB 016 28266151						
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		Date Time:			
1 Anthony Laycock AECOM		5/31/23 12:30		2 iGon AECOM		06/01/23 15:30		3 iGon AECOM		5/31/23		4 United Cargo		8			
5 United Cargo				6 [Signature] 06/01/23 15:30				7									
Lab Use Only: Cooler Temperature (s) Celsius (corrected):																	
http://www.sgs.com/en/terms-and-conditions																	

PFAS_COCs_ALL.xls Rev 031318

FC6537: Chain of Custody

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SGS Sample Receipt Summary

Job Number: FC6537

Client: AECOM

Project: N6274223F0104 RH Fire Suppression System

Date / Time Received: 6/1/2023 3:30:00 PM

Delivery Method: United Cargo/Airspace

Airbill #'s: United Cargo AWB #: 016-28266151

Therm ID: IR 1;

Therm CF: -0.1;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.7);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

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 _____

Other: (Specify) pH 1.0 - 12.0 222221

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SHAYLAP

Date: 6/1/2023 3:30:00 PM

Reviewer: SP

Date: 6/5/2023

FC6537: Chain of Custody

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QC Evaluation: DOD QSM5.x Limits

Job Number: FC6537
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 05/31/23

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 FC6537

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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: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-IBLK	6Q18930.D	1	06/07/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

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: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-IBLK	6Q18930.D	1	06/07/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

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	100% 20-150%
	13C5-PFPeA	101% 20-150%
	13C5-PFHxA	100% 20-150%
	13C4-PFHpA	101% 20-150%
	13C8-PFOA	93% 20-150%
	13C9-PFNA	98% 20-150%
	13C6-PFDA	96% 20-150%
	13C7-PFUnDA	97% 20-150%
	13C2-PFDoDA	97% 20-150%
	13C2-PFTeDA	97% 20-150%
	13C3-PFBS	102% 20-150%
	13C3-PFHxS	102% 20-150%
	13C8-PFOS	105% 20-150%
	13C8-FOSA	104% 20-150%
	d3-MeFOSA	101% 20-150%
	d5-EtFOSA	107% 20-150%
	d3-MeFOSAA	112% 20-150%
	d5-EtFOSAA	114% 20-150%
	d7-MeFOSE	112% 20-150%
	d9-EtFOSE	108% 20-150%
	13C2-4:2FTS	111% 20-180%
	13C2-6:2FTS	102% 20-180%
	13C2-8:2FTS	105% 20-180%
	13C3-HFPO-DA	102% 20-150%

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Instrument Blank

Job Number: FC6537
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-IBLK	6Q19030.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

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 acid	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: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-IBLK	6Q19030.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

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	101% 20-150%
	13C5-PFPeA	101% 20-150%
	13C5-PFHxA	108% 20-150%
	13C4-PFHpA	101% 20-150%
	13C8-PFOA	95% 20-150%
	13C9-PFNA	103% 20-150%
	13C6-PFDA	100% 20-150%
	13C7-PFUnDA	101% 20-150%
	13C2-PFDoDA	94% 20-150%
	13C2-PFTeDA	96% 20-150%
	13C3-PFBS	103% 20-150%
	13C3-PFHxS	102% 20-150%
	13C8-PFOS	95% 20-150%
	13C8-FOSA	94% 20-150%
	d3-MeFOSA	98% 20-150%
	d5-EtFOSA	99% 20-150%
	d3-MeFOSAA	111% 20-150%
	d5-EtFOSAA	107% 20-150%
	d7-MeFOSE	98% 20-150%
	d9-EtFOSE	98% 20-150%
	13C2-4:2FTS	118% 20-180%
	13C2-6:2FTS	110% 20-180%
	13C2-8:2FTS	103% 20-180%
	13C3-HFPO-DA	108% 20-150%

Continuing Calibration Blank

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-ICCB	6Q18993.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4

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

Continuing Calibration Blank

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-ICCB	6Q18993.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4

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

CAS No.	ID Standard Recoveries	Limits
	13C4-PFBA	100% 20-150%
	13C5-PFPeA	99% 20-150%
	13C5-PFHxA	103% 20-150%
	13C4-PFHpA	100% 20-150%
	13C8-PFOA	96% 20-150%
	13C9-PFNA	95% 20-150%
	13C6-PFDA	109% 20-150%
	13C7-PFUnDA	104% 20-150%
	13C2-PFDoDA	99% 20-150%
	13C2-PFTeDA	101% 20-150%
	13C3-PFBS	98% 20-150%
	13C3-PFHxS	101% 20-150%
	13C8-PFOS	101% 20-150%
	13C8-FOSA	103% 20-150%
	d3-MeFOSA	104% 20-150%
	d5-EtFOSA	106% 20-150%
	d3-MeFOSAA	114% 20-150%
	d5-EtFOSAA	114% 20-150%
	d7-MeFOSE	105% 20-150%
	d9-EtFOSE	105% 20-150%
	13C2-4:2FTS	111% 20-180%
	13C2-6:2FTS	116% 20-180%
	13C2-8:2FTS	112% 20-180%
	13C3-HFPO-DA	108% 20-150%

6.1.3
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Continuing Calibration Blank

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-ICCB	6Q19005.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-5

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: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-ICCB	6Q19005.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-5

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	101% 20-150%
	13C5-PFPeA	102% 20-150%
	13C5-PFHxA	99% 20-150%
	13C4-PFHpA	102% 20-150%
	13C8-PFOA	98% 20-150%
	13C9-PFNA	99% 20-150%
	13C6-PFDA	99% 20-150%
	13C7-PFUnDA	98% 20-150%
	13C2-PFDoDA	96% 20-150%
	13C2-PFTeDA	96% 20-150%
	13C3-PFBS	103% 20-150%
	13C3-PFHxS	103% 20-150%
	13C8-PFOS	104% 20-150%
	13C8-FOSA	106% 20-150%
	d3-MeFOSA	104% 20-150%
	d5-EtFOSA	108% 20-150%
	d3-MeFOSAA	118% 20-150%
	d5-EtFOSAA	110% 20-150%
	d7-MeFOSE	108% 20-150%
	d9-EtFOSE	107% 20-150%
	13C2-4:2FTS	113% 20-180%
	13C2-6:2FTS	112% 20-180%
	13C2-8:2FTS	117% 20-180%
	13C3-HFPO-DA	104% 20-150%

Method Blank Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-MB	6Q18997.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

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: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-MB	6Q18997.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

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	112% 20-150%
	13C5-PFPeA	110% 20-150%
	13C5-PFHxA	113% 20-150%
	13C4-PFHpA	111% 20-150%
	13C8-PFOA	112% 20-150%
	13C9-PFNA	109% 20-150%
	13C6-PFDA	118% 20-150%
	13C7-PFUnDA	107% 20-150%
	13C2-PFDoDA	100% 20-150%
	13C2-PFTeDA	92% 20-150%
	13C3-PFBS	110% 20-150%
	13C3-PFHxS	111% 20-150%
	13C8-PFOS	110% 20-150%
	13C8-FOSA	79% 20-150%
	d3-MeFOSA	84% 20-150%
	d5-EtFOSA	93% 20-150%
	d3-MeFOSAA	119% 20-150%
	d5-EtFOSAA	106% 20-150%
	d7-MeFOSE	75% 20-150%
	d9-EtFOSE	90% 20-150%
	13C2-4:2FTS	125% 20-180%
	13C2-6:2FTS	128% 20-180%
	13C2-8:2FTS	125% 20-180%
	13C3-HFPO-DA	118% 20-150%

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Continuing Calibration Blank

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-ICCB	6Q19026.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q283-IBLK

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: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-ICCB	6Q19026.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q283-IBLK

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	100% 20-150%
	13C5-PFPeA	108% 20-150%
	13C5-PFHxA	110% 20-150%
	13C4-PFHpA	105% 20-150%
	13C8-PFOA	96% 20-150%
	13C9-PFNA	105% 20-150%
	13C6-PFDA	98% 20-150%
	13C7-PFUnDA	101% 20-150%
	13C2-PFDoDA	99% 20-150%
	13C2-PFTeDA	99% 20-150%
	13C3-PFBS	104% 20-150%
	13C3-PFHxS	103% 20-150%
	13C8-PFOS	97% 20-150%
	13C8-FOSA	102% 20-150%
	d3-MeFOSA	101% 20-150%
	d5-EtFOSA	99% 20-150%
	d3-MeFOSAA	112% 20-150%
	d5-EtFOSAA	111% 20-150%
	d7-MeFOSE	100% 20-150%
	d9-EtFOSE	102% 20-150%
	13C2-4:2FTS	109% 20-180%
	13C2-6:2FTS	111% 20-180%
	13C2-8:2FTS	103% 20-180%
	13C3-HFPO-DA	110% 20-150%

Continuing Calibration Blank

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-ICCB	6Q19041.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q283-IBLK

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: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q283-ICCB	6Q19041.D	1	06/08/23	MV	n/a	n/a	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

S6Q283-IBLK

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	100% 20-150%
	13C5-PFPeA	107% 20-150%
	13C5-PFHxA	105% 20-150%
	13C4-PFHpA	106% 20-150%
	13C8-PFOA	96% 20-150%
	13C9-PFNA	99% 20-150%
	13C6-PFDA	106% 20-150%
	13C7-PFUnDA	102% 20-150%
	13C2-PFDoDA	99% 20-150%
	13C2-PFTeDA	103% 20-150%
	13C3-PFBS	105% 20-150%
	13C3-PFHxS	107% 20-150%
	13C8-PFOS	104% 20-150%
	13C8-FOSA	104% 20-150%
	d3-MeFOSA	105% 20-150%
	d5-EtFOSA	107% 20-150%
	d3-MeFOSAA	119% 20-150%
	d5-EtFOSAA	113% 20-150%
	d7-MeFOSE	104% 20-150%
	d9-EtFOSE	102% 20-150%
	13C2-4:2FTS	115% 20-180%
	13C2-6:2FTS	115% 20-180%
	13C2-8:2FTS	106% 20-180%
	13C3-HFPO-DA	114% 20-150%

Blank Spike Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-LLBS	6Q18996.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0330	110	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0165	110	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0081	108	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0086	115	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0080	107	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0080	107	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0082	109	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0080	107	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0080	107	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0081	108	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0086	115	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0071	107	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0075	106	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0073	106	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0083	116	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0071	102	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0082	114	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0077	106	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0075	103	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0281	0.0318	113	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0324	114	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0316	110	40-150
754-91-6	PFOSA	0.0075	0.0084	112	40-150
31506-32-8	MeFOSA	0.015	0.0146	97	40-150
4151-50-2	EtFOSA	0.015	0.0149	99	40-150
2355-31-9	MeFOSAA	0.0075	0.0078	104	40-150
2991-50-6	EtFOSAA	0.0075	0.0073	97	40-150
24448-09-7	MeFOSE	0.0375	0.0396	106	40-150
1691-99-2	EtFOSE	0.0375	0.0396	106	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0157	105	40-150
919005-14-4	ADONA	0.0142	0.0139	98	40-150
377-73-1	PFMPA	0.015	0.0165	110	40-150
863090-89-5	PFMBA	0.015	0.0163	109	40-150
151772-58-6	NFDHA	0.015	0.0174	116	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.014	0.0140	100	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0142	0.0133	94	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-LLBS	6Q18996.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0141	106	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0306	82	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.188	0.190	101	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.196	105	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	108%	20-150%
	13C5-PFPeA	108%	20-150%
	13C5-PFHxA	107%	20-150%
	13C4-PFHpA	104%	20-150%
	13C8-PFOA	109%	20-150%
	13C9-PFNA	106%	20-150%
	13C6-PFDA	106%	20-150%
	13C7-PFUnDA	103%	20-150%
	13C2-PFDoDA	105%	20-150%
	13C2-PFTeDA	93%	20-150%
	13C3-PFBS	110%	20-150%
	13C3-PFHxS	110%	20-150%
	13C8-PFOS	111%	20-150%
	13C8-FOSA	83%	20-150%
	d3-MeFOSA	89%	20-150%
	d5-EtFOSA	93%	20-150%
	d3-MeFOSAA	120%	20-150%
	d5-EtFOSAA	114%	20-150%
	d7-MeFOSE	72%	20-150%
	d9-EtFOSE	89%	20-150%
	13C2-4:2FTS	117%	20-180%
	13C2-6:2FTS	122%	20-180%
	13C2-8:2FTS	119%	20-180%
	13C3-HFPO-DA	117%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-BS	6Q18995.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.1	0.108	108	40-150
2706-90-3	Perfluoropentanoic acid	0.05	0.0532	106	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0263	105	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0267	107	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0272	109	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0270	108	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0283	113	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0293	117	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0268	107	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0260	104	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0272	109	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0235	106	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0252	107	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0246	108	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0274	115	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0262	113	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0290	121	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0279	116	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0274	113	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.0938	0.108	115	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.110	116	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.104	108	40-150
754-91-6	PFOSA	0.025	0.0265	106	40-150
31506-32-8	MeFOSA	0.05	0.0501	100	40-150
4151-50-2	EtFOSA	0.05	0.0473	95	40-150
2355-31-9	MeFOSAA	0.025	0.0255	102	40-150
2991-50-6	EtFOSAA	0.025	0.0250	100	40-150
24448-09-7	MeFOSE	0.125	0.126	101	40-150
1691-99-2	EtFOSE	0.125	0.122	98	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0514	103	40-150
919005-14-4	ADONA	0.0473	0.0469	99	40-150
377-73-1	PFMPA	0.05	0.0293	59	40-150
863090-89-5	PFMBA	0.05	0.0550	110	40-150
151772-58-6	NFDHA	0.05	0.0548	110	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0468	0.0492	105	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0473	0.0459	97	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-BS	6Q18995.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0488	110	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0611	49	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.625	0.623	100	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.654	105	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	31%	20-150%
	13C5-PFPeA	107%	20-150%
	13C5-PFHxA	110%	20-150%
	13C4-PFHpA	108%	20-150%
	13C8-PFOA	104%	20-150%
	13C9-PFNA	107%	20-150%
	13C6-PFDA	110%	20-150%
	13C7-PFUnDA	109%	20-150%
	13C2-PFDoDA	110%	20-150%
	13C2-PFTeDA	101%	20-150%
	13C3-PFBS	114%	20-150%
	13C3-PFHxS	110%	20-150%
	13C8-PFOS	103%	20-150%
	13C8-FOSA	91%	20-150%
	d3-MeFOSA	96%	20-150%
	d5-EtFOSA	105%	20-150%
	d3-MeFOSAA	123%	20-150%
	d5-EtFOSAA	123%	20-150%
	d7-MeFOSE	83%	20-150%
	d9-EtFOSE	100%	20-150%
	13C2-4:2FTS	118%	20-180%
	13C2-6:2FTS	120%	20-180%
	13C2-8:2FTS	124%	20-180%
	13C3-HFPO-DA	115%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-MS	6Q19000.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283
FC6537-2	6Q18999.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

CAS No.	Compound	FC6537-2 ug/l	Spike Q	MS ug/l	MS %	Limits	
375-22-4	Perfluorobutanoic acid	0.015 U		0.0909	0.103	113	40-150
2706-90-3	Perfluoropentanoic acid	0.0027 J		0.0455	0.0528	110	40-150
307-24-4	Perfluorohexanoic acid	0.00087 J		0.0227	0.0249	106	40-150
375-85-9	Perfluoroheptanoic acid	0.0036 U		0.0227	0.0260	114	40-150
335-67-1	Perfluorooctanoic acid	0.0036 U		0.0227	0.0255	112	40-150
375-95-1	Perfluorononanoic acid	0.0036 U		0.0227	0.0259	114	40-150
335-76-2	Perfluorodecanoic acid	0.0036 U		0.0227	0.0260	114	40-150
2058-94-8	Perfluoroundecanoic acid	0.0036 U		0.0227	0.0254	112	40-150
307-55-1	Perfluorododecanoic acid	0.0036 U		0.0227	0.0252	111	40-150
72629-94-8	Perfluorotridecanoic acid	0.0036 U		0.0227	0.0269	118	40-150
376-06-7	Perfluorotetradecanoic acid	0.0036 U		0.0227	0.0245	108	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0036 U		0.0202	0.0226	112	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0045 U		0.0214	0.0250	117	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0036 U		0.0208	0.0230	111	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0036 U		0.0217	0.0243	112	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0036 U		0.0211	0.0243	115	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0036 U		0.0219	0.0226	103	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0036 U		0.0219	0.0231	105	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0045 U		0.022	0.0225	102	40-150
757124-72-44:2	Fluorotelomer sulfonate	0.018 U		0.0852	0.0978	115	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018 U		0.0864	0.0980	113	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U		0.0873	0.0970	111	40-150
754-91-6	PFOSA	0.0036 U		0.0227	0.0265	117	40-150
31506-32-8	MeFOSA	0.0073 U		0.0455	0.0447	98	40-150
4151-50-2	EtFOSA	0.0073 U		0.0455	0.0438	96	40-150
2355-31-9	MeFOSAA	0.0045 U		0.0227	0.0239	105	40-150
2991-50-6	EtFOSAA	0.0045 U		0.0227	0.0238	105	40-150
24448-09-7	MeFOSE	0.036 U		0.114	0.125	110	40-150
1691-99-2	EtFOSE	0.036 U		0.114	0.118	104	40-150
13252-13-6	HFPO-DA (GenX)	0.0036 U		0.0455	0.0498	110	40-150
919005-14-4	ADONA	0.0073 U		0.043	0.0476	111	40-150
377-73-1	PFMPA	0.0073 U		0.0455	0.0343	75	40-150
863090-89-5	PFMBA	0.0073 U		0.0455	0.0504	111	40-150
151772-58-6	NFDHA	0.0073 U		0.0455	0.0501	110	40-150
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0073 U		0.0425	0.0427	100	40-150
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0073 U		0.043	0.0377	88	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-MS	6Q19000.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283
FC6537-2	6Q18999.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

CAS No.	Compound	FC6537-2 ug/l	Spike Q	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0073 U	0.0405	0.0426	105	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.018 U	0.114	0.0810	71	40-150
914637-49-35:3	Fluorotelomer carboxylate	0.091 U	0.568	0.563	99	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.091 U	0.568	0.565	99	40-150

CAS No.	ID Standard Recoveries	MS	FC6537-2	Limits
	13C4-PFBA	35%	63%	20-150%
	13C5-PFPeA	109%	108%	20-150%
	13C5-PFHxA	110%	104%	20-150%
	13C4-PFHpA	104%	107%	20-150%
	13C8-PFOA	104%	102%	20-150%
	13C9-PFNA	96%	104%	20-150%
	13C6-PFDA	93%	90%	20-150%
	13C7-PFUnDA	93%	88%	20-150%
	13C2-PFDoDA	88%	81%	20-150%
	13C2-PFTeDA	89%	80%	20-150%
	13C3-PFBS	109%	109%	20-150%
	13C3-PFHxS	103%	104%	20-150%
	13C8-PFOS	101%	97%	20-150%
	13C8-FOSA	90%	98%	20-150%
	d3-MeFOSA	98%	97%	20-150%
	d5-EtFOSA	106%	101%	20-150%
	d3-MeFOSAA	114%	113%	20-150%
	d5-EtFOSAA	114%	108%	20-150%
	d7-MeFOSE	87%	88%	20-150%
	d9-EtFOSE	97%	95%	20-150%
	13C2-4:2FTS	116%	118%	20-180%
	13C2-6:2FTS	119%	124%	20-180%
	13C2-8:2FTS	103%	100%	20-180%
	13C3-HFPO-DA	110%	112%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-DUP	6Q19002.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283
FC6537-3	6Q19001.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

CAS No.	Compound	FC6537-3 ug/l	DUP Q ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.015 U	ND		nc	30
2706-90-3	Perfluoropentanoic acid	0.0074 U	ND		nc	30
307-24-4	Perfluorohexanoic acid	0.0037 U	ND		nc	30
375-85-9	Perfluoroheptanoic acid	0.0037 U	ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0037 U	ND		nc	30
375-95-1	Perfluorononanoic acid	0.0037 U	ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0037 U	ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0037 U	ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0037 U	ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0037 U	ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0037 U	ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0037 U	ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0046 U	ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0037 U	ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0037 U	ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0037 U	ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0037 U	ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0037 U	ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0046 U	ND		nc	30
757124-72-44:2	Fluorotelomer sulfonate	0.019 U	ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.019 U	ND		nc	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.019 U	ND		nc	30
754-91-6	PFOSA	0.0037 U	ND		nc	30
31506-32-8	MeFOSA	0.0074 U	ND		nc	30
4151-50-2	EtFOSA	0.0074 U	ND		nc	30
2355-31-9	MeFOSAA	0.0046 U	ND		nc	30
2991-50-6	EtFOSAA	0.0046 U	ND		nc	30
24448-09-7	MeFOSE	0.037 U	ND		nc	30
1691-99-2	EtFOSE	0.037 U	ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.0037 U	ND		nc	30
919005-14-4	ADONA	0.0074 U	ND		nc	30
377-73-1	PFMPA	0.0074 U	ND		nc	30
863090-89-5	PFMBA	0.0074 U	ND		nc	30
151772-58-6	NFDHA	0.0074 U	ND		nc	30
756426-58-19	Cl-PF3ONS (F-53B Major)	0.0074 U	ND		nc	30
763051-92-91	Cl-PF3OUdS (F-53B Minor)	0.0074 U	ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC6537
 Account: AECOMCOD AECOM, INC.
 Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97216-DUP	6Q19002.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283
FC6537-3	6Q19001.D	1	06/08/23	MV	06/06/23	OP97216	S6Q283

The QC reported here applies to the following samples:

Method: EPA DRAFT 1633

FC6537-1, FC6537-2, FC6537-3, FC6537-4, FC6537-5

CAS No.	Compound	FC6537-3 ug/l	DUP Q	ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0074 U	ND			nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.019 U	ND			nc	30
914637-49-35:3	Fluorotelomer carboxylate	0.093 U	ND			nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.093 U	ND			nc	30

CAS No.	ID Standard Recoveries	DUP	FC6537-3	Limits
	13C4-PFBA	113%	108%	20-150%
	13C5-PFPeA	120%	110%	20-150%
	13C5-PFHxA	120%	105%	20-150%
	13C4-PFHpA	115%	109%	20-150%
	13C8-PFOA	114%	108%	20-150%
	13C9-PFNA	105%	102%	20-150%
	13C6-PFDA	105%	103%	20-150%
	13C7-PFUnDA	102%	92%	20-150%
	13C2-PFDoDA	95%	87%	20-150%
	13C2-PFTeDA	90%	88%	20-150%
	13C3-PFBS	119%	109%	20-150%
	13C3-PFHxS	116%	109%	20-150%
	13C8-PFOS	103%	105%	20-150%
	13C8-FOSA	97%	102%	20-150%
	d3-MeFOSA	96%	97%	20-150%
	d5-EtFOSA	101%	106%	20-150%
	d3-MeFOSAA	119%	115%	20-150%
	d5-EtFOSAA	109%	115%	20-150%
	d7-MeFOSE	90%	93%	20-150%
	d9-EtFOSE	97%	105%	20-150%
	13C2-4:2FTS	128%	115%	20-180%
	13C2-6:2FTS	126%	125%	20-180%
	13C2-8:2FTS	124%	109%	20-180%
	13C3-HFPO-DA	124%	116%	20-150%

* = Outside of Control Limits.