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

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Automated Report

Technical Report for

AECOM, INC.

N6274223F0104 RH Fire Suppression System

60697810

SGS Job Number: FC6325

Sampling Date: 05/23/23

Report to:

AECOM, Inc
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Denver, CO 80237
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ATTN: Katie Abbott

Total number of pages in report: 38

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

Norm Farmer
Technical Director

Client Service contact: Elvin Kumar 407-425-6700

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

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SGS North America Inc.

Sample Summary

AECOM, INC.

Job No: FC6325

N6274223F0104 RH Fire Suppression System
Project No: 60697810

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FC6325-1	05/23/23	09:25	CPCW	05/24/23	AQ	Ground Water	AF-RHMW225401-WGN01B-2305W4
FC6325-2	05/23/23	12:42	MDFS	05/24/23	AQ	Ground Water	AF-RHMW10-WGN01LF-2305W4
FC6325-3	05/23/23	10:35	MD	05/24/23	AQ	Ground Water	AF-HDMW225303-WGN01LF-2305W4

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job No:** FC6325

Site: N6274223F0104 RH Fire Suppression System **Report Date:** 6/1/2023 8:17:26 PM

On 05/24/2023, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc - Orlando. at a maximum corrected temperature of 2.3 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC6325 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:** OP97092

Sample(s) FC6325-1MS, FC6325-2DUP 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: FC6325
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 05/23/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FC6325-1	**AF-RHMW225401-WGN01B-2305W4**					
Perfluoropentanoic acid		1.2 J	7.3	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanoic acid		0.88 J	3.6	1.8	ng/l	EPA DRAFT 1633
Perfluoroheptanoic acid		0.56 J	3.6	1.8	ng/l	EPA DRAFT 1633
Perfluorooctanoic acid		1.2 J	3.6	0.91	ng/l	EPA DRAFT 1633
Perfluorobutanesulfonic acid		0.64 J	3.6	1.8	ng/l	EPA DRAFT 1633
Perfluorohexanesulfonic acid		0.79 J	3.6	1.8	ng/l	EPA DRAFT 1633
FC6325-2	**AF-RHMW10-WGN01LF-2305W4**					
No hits reported in this sample.						
FC6325-3	**AF-HDMW225303-WGN01LF-2305W4**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: AF-RHMW225401-WGN01B-2305W4
Lab Sample ID: FC6325-1
Matrix: AQ - Ground Water
Method: EPA DRAFT 1633 EPA 1633 DRAFT
Project: N6274223F0104 RH Fire Suppression System

Date Sampled: 05/23/23
Date Received: 05/24/23
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q18655.D	1	06/01/23 09:43	MV	05/26/23 10:30	OP97092	S6Q279
Run #2							

	Initial Volume	Final Volume
Run #1	550 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	15	3.6	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.2	7.3	1.8	0.85	ng/l	J
307-24-4	Perfluorohexanoic acid	0.88	3.6	1.8	0.45	ng/l	J
375-85-9	Perfluoroheptanoic acid	0.56	3.6	1.8	0.45	ng/l	J
335-67-1	Perfluorooctanoic acid	1.2	3.6	0.91	0.45	ng/l	J
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	0.64	3.6	1.8	0.45	ng/l	J
2706-91-4	Perfluoropentanesulfonic acid	3.6 U	4.5	3.6	1.0	ng/l	
355-46-4	Perfluorohexanesulfonic acid	0.79	3.6	1.8	0.64	ng/l	J
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	
PERFLUOROOCTANE 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-RHMW225401-WGN01B-2305W4		
Lab Sample ID:	FC6325-1	**Date Sampled:**	05/23/23
Matrix:	AQ - Ground Water	**Date Received:**	05/24/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.91	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	
PERFLUOROOCTANE 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	101%		20-150%
	13C5-PFPeA	113%		20-150%
	13C5-PFHxA	115%		20-150%
	13C4-PFHpA	115%		20-150%
	13C8-PFOA	115%		20-150%
	13C9-PFNA	109%		20-150%
	13C6-PFDA	112%		20-150%
	13C7-PFUnDA	114%		20-150%
	13C2-PFDoDA	103%		20-150%
	13C2-PFTeDA	100%		20-150%
	13C3-PFBS	117%		20-150%
	13C3-PFHxS	108%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW225401-WGN01B-2305W4		
Lab Sample ID:	FC6325-1	**Date Sampled:**	05/23/23
Matrix:	AQ - Ground Water	**Date Received:**	05/24/23
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	106%		20-150%
	13C8-FOSA	94%		20-150%
	d3-MeFOSA	89%		20-150%
	d5-EtFOSA	91%		20-150%
	d3-MeFOSAA	111%		20-150%
	d5-EtFOSAA	111%		20-150%
	d7-MeFOSE	81%		20-150%
	d9-EtFOSE	91%		20-150%
	13C2-4:2FTS	117%		20-180%
	13C2-6:2FTS	118%		20-180%
	13C2-8:2FTS	124%		20-180%
	13C3-HFPO-DA	111%		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-2305W4		
Lab Sample ID:	FC6325-2	**Date Sampled:**	05/23/23
Matrix:	AQ - Ground Water	**Date Received:**	05/24/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q18657.D	1	06/01/23 10:12	MV	05/26/23 10:30	OP97092	S6Q279
Run #2							

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

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYL CARBOXYLIC ACIDS							
375-22-4	Perfluorobutanoic acid	3.5 U	14	3.5	1.7	ng/l	
2706-90-3	Perfluoropentanoic acid	1.8 U	7.0	1.8	0.82	ng/l	
307-24-4	Perfluorohexanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
375-85-9	Perfluoroheptanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
335-67-1	Perfluorooctanoic acid	0.88 U	3.5	0.88	0.44	ng/l	
375-95-1	Perfluorononanoic acid	1.8 U	3.5	1.8	0.54	ng/l	
335-76-2	Perfluorodecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
2058-94-8	Perfluoroundecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
307-55-1	Perfluorododecanoic acid	1.8 U	3.5	1.8	0.53	ng/l	
72629-94-8	Perfluorotridecanoic acid	1.8 U	3.5	1.8	0.74	ng/l	
376-06-7	Perfluorotetradecanoic acid	1.8 U	3.5	1.8	0.44	ng/l	
PERFLUOROALKYL SULFONIC ACIDS							
375-73-5	Perfluorobutanesulfonic acid	1.8 U	3.5	1.8	0.44	ng/l	
2706-91-4	Perfluoropentanesulfonic acid	3.5 U	4.4	3.5	0.98	ng/l	
355-46-4	Perfluorohexanesulfonic acid	1.8 U	3.5	1.8	0.61	ng/l	
375-92-8	Perfluoroheptanesulfonic acid	1.8 U	3.5	1.8	0.44	ng/l	
1763-23-1	Perfluorooctanesulfonic acid	1.8 U	3.5	1.8	0.47	ng/l	
68259-12-1	Perfluorononanesulfonic acid	1.8 U	3.5	1.8	0.50	ng/l	
335-77-3	Perfluorodecanesulfonic acid	1.8 U	3.5	1.8	0.56	ng/l	
79780-39-5	Perfluorododecanesulfonic aci	3.5 U	4.4	3.5	1.0	ng/l	
FLUOROTELOMER SULFONIC ACIDS							
757124-72-4	4:2 Fluorotelomer sulfonate	7.0 U	18	7.0	2.8	ng/l	
27619-97-2	6:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.0	ng/l	
39108-34-4	8:2 Fluorotelomer sulfonate	7.0 U	18	7.0	3.6	ng/l	
PERFLUOROOCTANE SULFONAMIDES							
754-91-6	PFOSA	1.8 U	3.5	1.8	0.59	ng/l	
31506-32-8	MeFOSA	3.5 U	7.0	3.5	0.88	ng/l	
4151-50-2	EtFOSA	3.5 U	7.0	3.5	0.88	ng/l	

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

Report of Analysis

Client Sample ID:	AF-RHMW10-WGN01LF-2305W4		
Lab Sample ID:	FC6325-2	**Date Sampled:**	05/23/23
Matrix:	AQ - Ground Water	**Date Received:**	05/24/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.5 U	4.4	3.5	0.88	ng/l	
2991-50-6	EtFOSAA	3.5 U	4.4	3.5	1.2	ng/l	
PERFLUOROOCTANE SULFONAMIDO ETHANOLS							
24448-09-7	MeFOSE	18 U	35	18	3.8	ng/l	
1691-99-2	EtFOSE	18 U	35	18	6.5	ng/l	
PER and POLYFLUOROETHER CARBOXYLIC ACIDS							
13252-13-6	HFPO-DA (GenX)	1.8 U	3.5	1.8	0.88	ng/l	
919005-14-4	ADONA	3.5 U	7.0	3.5	1.6	ng/l	
377-73-1	PFMPA	1.8 U	7.0	1.8	0.88	ng/l	
863090-89-5	PFMBA	3.5 U	7.0	3.5	1.0	ng/l	
151772-58-6	NFDHA	3.5 U	7.0	3.5	1.1	ng/l	
PER and POLYFLUOROETHER SULFONIC ACIDS							
756426-58-1	9Cl-PF3ONS (F-53B Major)	3.5 U	7.0	3.5	1.2	ng/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	3.5 U	7.0	3.5	1.5	ng/l	
113507-82-7	PFEESA	1.8 U	7.0	1.8	0.68	ng/l	
FLUOROTELOMER CARBOXYLIC ACIDS							
356-02-5	3:3 Fluorotelomer carboxylate	8.8 U	18	8.8	4.0	ng/l	
914637-49-3	5:3 Fluorotelomer carboxylate	18 U	88	18	7.7	ng/l	
812-70-4	7:3 Fluorotelomer carboxylate	18 U	88	18	6.9	ng/l	

CAS No.	ID Standard Recoveries	Run# 1	Run# 2	Limits
	13C4-PFBA	114%		20-150%
	13C5-PFPeA	119%		20-150%
	13C5-PFHxA	117%		20-150%
	13C4-PFHpA	121%		20-150%
	13C8-PFOA	117%		20-150%
	13C9-PFNA	112%		20-150%
	13C6-PFDA	118%		20-150%
	13C7-PFUnDA	112%		20-150%
	13C2-PFDoDA	108%		20-150%
	13C2-PFTeDA	102%		20-150%
	13C3-PFBS	122%		20-150%
	13C3-PFHxS	116%		20-150%

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

Report of Analysis

Client Sample ID:	AF-RHMW10-WGN01LF-2305W4		
Lab Sample ID:	FC6325-2	**Date Sampled:**	05/23/23
Matrix:	AQ - Ground Water	**Date Received:**	05/24/23
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	113%		20-150%
	13C8-FOSA	97%		20-150%
	d3-MeFOSA	92%		20-150%
	d5-EtFOSA	97%		20-150%
	d3-MeFOSAA	116%		20-150%
	d5-EtFOSAA	106%		20-150%
	d7-MeFOSE	93%		20-150%
	d9-EtFOSE	103%		20-150%
	13C2-4:2FTS	129%		20-180%
	13C2-6:2FTS	124%		20-180%
	13C2-8:2FTS	119%		20-180%
	13C3-HFPO-DA	118%		20-150%

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

Report of Analysis

Client Sample ID:	AF-HDMW225303-WGN01LF-2305W4		
Lab Sample ID:	FC6325-3	**Date Sampled:**	05/23/23
Matrix:	AQ - Ground Water	**Date Received:**	05/24/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6Q18659.D	1	06/01/23 10:41	MV	05/26/23 10:30	OP97092	S6Q279
Run #2							

	Initial Volume	Final Volume
Run #1	550 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	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	
PERFLUOROOCTANE 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-2305W4		
Lab Sample ID:	FC6325-3	**Date Sampled:**	05/23/23
Matrix:	AQ - Ground Water	**Date Received:**	05/24/23
Method:	EPA DRAFT 1633 EPA 1633 DRAFT	**Percent Solids:**	n/a
Project:	N6274223F0104 RH Fire Suppression System		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROOCTANE SULFONAMIDOACETIC ACIDS							
2355-31-9	MeFOSAA	3.6 U	4.5	3.6	0.91	ng/l	
2991-50-6	EtFOSAA	3.6 U	4.5	3.6	1.2	ng/l	
PERFLUOROOCTANE 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	120%		20-150%
	13C5-PFPeA	121%		20-150%
	13C5-PFHxA	120%		20-150%
	13C4-PFHpA	121%		20-150%
	13C8-PFOA	120%		20-150%
	13C9-PFNA	116%		20-150%
	13C6-PFDA	112%		20-150%
	13C7-PFUnDA	106%		20-150%
	13C2-PFDoDA	102%		20-150%
	13C2-PFTeDA	98%		20-150%
	13C3-PFBS	116%		20-150%
	13C3-PFHxS	111%		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-2305W4		
Lab Sample ID:	FC6325-3	**Date Sampled:**	05/23/23
Matrix:	AQ - Ground Water	**Date Received:**	05/24/23
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	115%		20-150%
	13C8-FOSA	98%		20-150%
	d3-MeFOSA	100%		20-150%
	d5-EtFOSA	109%		20-150%
	d3-MeFOSAA	106%		20-150%
	d5-EtFOSAA	112%		20-150%
	d7-MeFOSE	101%		20-150%
	d9-EtFOSE	115%		20-150%
	13C2-4:2FTS	128%		20-180%
	13C2-6:2FTS	125%		20-180%
	13C2-8:2FTS	111%		20-180%
	13C3-HFPO-DA	122%		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

FC6325

SGS - ORLANDO JOB # :

COC #: 2305W4AFSG07

PAGE 1 OF 1

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

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

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

Project Information

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

Analytical Information

PFAS EPA Draft 1633

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
1	AF-RHMW225401-WGN01B-2305W4	5/23/23	0925	CP,CW,M	GW	3		X							X	

INITIAL ASSESSMENT

LABEL VERIFICATION

Turnaround Time (Business days)

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

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
United Arms 016-946C7607

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

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 Cristian Perez /AECOM	5/23/23 1315	2 AECOM	3 AECOM	5/23/23 1550	4 5/24/23 1500
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

Lab Use Only : Cooler Temperature (s) Celsius (corrected): 2.4 [illegible]

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

PFAS_COCs_ALL.xls Rev 031318

FC6325: Chain of Custody
Page 1 of 4

SGS North America Inc - Orlando
Chain of Custody

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

FC6325

SGS #: 2305W4AFSG03
SGS - ORLANDO JOB #: PAGE 1 OF 1

SGS - ORLANDO Quote #	SKIFF #

Client / Reporting Information

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

Project Information

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

Analytical Information

PFAS EPA Draft 1633

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	PFAS EPA Draft 1633	LAB USE ONLY
2	AF-RHMW10-WGN01LF-2305W4	05/23/23	12:42	MJFS	GW	3		X								X	

Turnaround Time (Business days)

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

Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
Printed AWB 816-9466760 2

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

	Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1		05/23/23 1400	2 Brittany Tommez/AECOM	3 Brittany Tommez/AECOM	5/23/23 1550	4
5	Relinquished by Affiliation	Date Time:	6 Received By/Affiliation	7 Relinquished By/Affiliation	Date Time:	8 Received By/Affiliation

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

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

PFAS_COCs_ALL.xls Rev 031318

FC6325: Chain of Custody
Page 2 of 4

SGS North America Inc - Orlando
Chain of Custody

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

FC6325 COC #: 2305W4AFSG04
SGS - ORLANDO JOB # : PAGE 1 OF 1

SGS - ORLANDO Quote # | SKIFF #

Client / Reporting Information

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

Project Information

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

Analytical Information

PFAS EPA Draft 1633

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

SGS Orlando Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	HNO3	H2SO4	NaOH	NaOH-ZnAc	DI WATER	MeOH	PFAS EPA Draft 1633	LAB USE ONLY
3	AF-HDMW225303-WGN01LF-2305W4	5/23/23	1035	MD	GW	3		X								X	

MD 5/23/23

MD 5/23/23

Turnaround Time (Business days)

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

Data Deliverable Information

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

Comments / Remarks

EDMS upload database: JBPHE
EDMS Coverage: AFFF Assessment Sampling GW
United AWB 016.94667602

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

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 M.DeBarros / AECOM	5/23/23 1130	2 Brittany Tominez / AECOM	3 Brittany Tominez / AECOM	5/23/23 1657	4 1500 5/24/23
5		6	7		8

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

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

PFAS_COCs_ALL.xls Rev 031318

SGS Sample Receipt Summary

Job Number: FC6325 **Client:** AECOM **Project:** N6274223F0104 RH Fire Suppression System

Date / Time Received: 5/24/2023 10:00:00 AM **Delivery Method:** United Cargo/Airspace **Airbill #'s:** United Cargo AWB #: 016-94667602

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

Cooler Temps (Raw Measured) °C: Cooler 1: (2.4);

Cooler Temps (Corrected) °C: Cooler 1: (2.3);

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: NATHANS Date: 5/24/2023 10:00:00 A Reviewer: CD Date: 5/26/2023

QC Evaluation: DOD QSM5.x Limits

Job Number: FC6325
Account: AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System
Collected: 05/23/23

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

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

* Sample used for QC is not from job FC6325

MS Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

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

Instrument Blank

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q279-IBLK	6Q18594.D	1	05/31/23	MV	n/a	n/a	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

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	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Instrument Blank

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q279-IBLK	6Q18594.D	1	05/31/23	MV	n/a	n/a	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

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	
914637-49-3	5:3 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	103%	20-150%
	13C5-PFHxA	103%	20-150%
	13C4-PFHpA	102%	20-150%
	13C8-PFOA	98%	20-150%
	13C9-PFNA	92%	20-150%
	13C6-PFDA	89%	20-150%
	13C7-PFUnDA	97%	20-150%
	13C2-PFDoDA	97%	20-150%
	13C2-PFTeDA	89%	20-150%
	13C3-PFBS	103%	20-150%
	13C3-PFHxS	103%	20-150%
	13C8-PFOS	96%	20-150%
	13C8-FOSA	105%	20-150%
	d3-MeFOSA	100%	20-150%
	d5-EtFOSA	102%	20-150%
	d3-MeFOSAA	99%	20-150%
	d5-EtFOSAA	102%	20-150%
	d7-MeFOSE	102%	20-150%
	d9-EtFOSE	103%	20-150%
	13C2-4:2FTS	107%	20-180%
	13C2-6:2FTS	104%	20-180%
	13C2-8:2FTS	111%	20-180%
	13C3-HFPO-DA	100%	20-150%

Continuing Calibration Blank

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q279-ICCB	6Q18654.D	1	06/01/23	MV	n/a	n/a	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

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	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q279-ICCB	6Q18654.D	1	06/01/23	MV	n/a	n/a	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

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	
914637-49-3	5:3 Fluorotelomer carboxylate	ND	0.10	0.0087	ug/l	
812-70-4	7:3 Fluorotelomer carboxylate	ND	0.10	0.0079	ug/l	

CAS No.	ID Standard Recoveries		Limits
	13C4-PFBA	99%	20-150%
	13C5-PFPeA	101%	20-150%
	13C5-PFHxA	102%	20-150%
	13C4-PFHpA	105%	20-150%
	13C8-PFOA	106%	20-150%
	13C9-PFNA	96%	20-150%
	13C6-PFDA	91%	20-150%
	13C7-PFUnDA	98%	20-150%
	13C2-PFDoDA	95%	20-150%
	13C2-PFTeDA	93%	20-150%
	13C3-PFBS	102%	20-150%
	13C3-PFHxS	105%	20-150%
	13C8-PFOS	100%	20-150%
	13C8-FOSA	102%	20-150%
	d3-MeFOSA	99%	20-150%
	d5-EtFOSA	104%	20-150%
	d3-MeFOSAA	106%	20-150%
	d5-EtFOSAA	102%	20-150%
	d7-MeFOSE	104%	20-150%
	d9-EtFOSE	99%	20-150%
	13C2-4:2FTS	108%	20-180%
	13C2-6:2FTS	110%	20-180%
	13C2-8:2FTS	115%	20-180%
	13C3-HFPO-DA	98%	20-150%

Method Blank Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-MB	6Q18646.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

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	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Method Blank Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-MB	6Q18646.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

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	
914637-49-3	5:3 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	113%	20-150%
	13C5-PFPeA	115%	20-150%
	13C5-PFHxA	112%	20-150%
	13C4-PFHpA	118%	20-150%
	13C8-PFOA	113%	20-150%
	13C9-PFNA	105%	20-150%
	13C6-PFDA	113%	20-150%
	13C7-PFUnDA	114%	20-150%
	13C2-PFDoDA	110%	20-150%
	13C2-PFTeDA	107%	20-150%
	13C3-PFBS	113%	20-150%
	13C3-PFHxS	114%	20-150%
	13C8-PFOS	116%	20-150%
	13C8-FOSA	81%	20-150%
	d3-MeFOSA	82%	20-150%
	d5-EtFOSA	92%	20-150%
	d3-MeFOSAA	115%	20-150%
	d5-EtFOSAA	109%	20-150%
	d7-MeFOSE	74%	20-150%
	d9-EtFOSE	92%	20-150%
	13C2-4:2FTS	127%	20-180%
	13C2-6:2FTS	128%	20-180%
	13C2-8:2FTS	113%	20-180%
	13C3-HFPO-DA	110%	20-150%

Continuing Calibration Blank

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q279-ICCB	6Q18643.D	1	06/01/23	MV	n/a	n/a	S6Q279

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

OP97092-BS, OP97092-LLBS, OP97092-MB

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	
757124-72-4	4:2 Fluorotelomer sulfonate	ND	0.020	0.0032	ug/l	
27619-97-2	6:2 Fluorotelomer sulfonate	ND	0.020	0.0035	ug/l	
39108-34-4	8:2 Fluorotelomer sulfonate	ND	0.020	0.0041	ug/l	
754-91-6	PFOSA	ND	0.0040	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	
756426-58-1	9Cl-PF3ONS (F-53B Major)	ND	0.0080	0.0014	ug/l	
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	ND	0.0080	0.0018	ug/l	

Continuing Calibration Blank

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
S6Q279-ICCB	6Q18643.D	1	06/01/23	MV	n/a	n/a	S6Q279

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

OP97092-BS, OP97092-LLBS, OP97092-MB

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	
914637-49-3	5:3 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	103%	20-150%
	13C5-PFHxA	105%	20-150%
	13C4-PFHpA	104%	20-150%
	13C8-PFOA	105%	20-150%
	13C9-PFNA	101%	20-150%
	13C6-PFDA	95%	20-150%
	13C7-PFUnDA	104%	20-150%
	13C2-PFDoDA	96%	20-150%
	13C2-PFTeDA	97%	20-150%
	13C3-PFBS	106%	20-150%
	13C3-PFHxS	102%	20-150%
	13C8-PFOS	98%	20-150%
	13C8-FOSA	100%	20-150%
	d3-MeFOSA	96%	20-150%
	d5-EtFOSA	100%	20-150%
	d3-MeFOSAA	99%	20-150%
	d5-EtFOSAA	102%	20-150%
	d7-MeFOSE	100%	20-150%
	d9-EtFOSE	99%	20-150%
	13C2-4:2FTS	110%	20-180%
	13C2-6:2FTS	112%	20-180%
	13C2-8:2FTS	116%	20-180%
	13C3-HFPO-DA	100%	20-150%

Blank Spike Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-LLBS	6Q18645.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-22-4	Perfluorobutanoic acid	0.03	0.0320	107	40-150
2706-90-3	Perfluoropentanoic acid	0.015	0.0162	108	40-150
307-24-4	Perfluorohexanoic acid	0.0075	0.0078	104	40-150
375-85-9	Perfluoroheptanoic acid	0.0075	0.0080	107	40-150
335-67-1	Perfluorooctanoic acid	0.0075	0.0082	109	40-150
375-95-1	Perfluorononanoic acid	0.0075	0.0076	101	40-150
335-76-2	Perfluorodecanoic acid	0.0075	0.0081	108	40-150
2058-94-8	Perfluoroundecanoic acid	0.0075	0.0082	109	40-150
307-55-1	Perfluorododecanoic acid	0.0075	0.0076	101	40-150
72629-94-8	Perfluorotridecanoic acid	0.0075	0.0079	105	40-150
376-06-7	Perfluorotetradecanoic acid	0.0075	0.0083	111	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00665	0.0071	107	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.00706	0.0074	105	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00686	0.0074	108	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.00715	0.0077	108	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.00696	0.0077	111	40-150
68259-12-1	Perfluorononanesulfonic acid	0.00722	0.0075	104	40-150
335-77-3	Perfluorodecanesulfonic acid	0.00724	0.0079	109	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.00728	0.0078	107	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0281	0.0308	110	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.0285	0.0313	110	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.0288	0.0280	97	40-150
754-91-6	PFOSA	0.0075	0.0077	103	40-150
31506-32-8	MeFOSA	0.015	0.0158	105	40-150
4151-50-2	EtFOSA	0.015	0.0149	99	40-150
2355-31-9	MeFOSAA	0.0075	0.0080	107	40-150
2991-50-6	EtFOSAA	0.0075	0.0083	111	40-150
24448-09-7	MeFOSE	0.0375	0.0372	99	40-150
1691-99-2	EtFOSE	0.0375	0.0365	97	40-150
13252-13-6	HFPO-DA (GenX)	0.015	0.0166	111	40-150
919005-14-4	ADONA	0.0142	0.0159	112	40-150
377-73-1	PFMPA	0.015	0.0163	109	40-150
863090-89-5	PFMBA	0.015	0.0163	109	40-150
151772-58-6	NFDHA	0.015	0.0159	106	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.014	0.0157	112	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0142	0.0157	111	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-LLBS	6Q18645.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0134	0.0131	98	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.0375	0.0288	77	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.188	0.170	91	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.188	0.183	98	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	113%	20-150%
	13C5-PFPeA	118%	20-150%
	13C5-PFHxA	122%	20-150%
	13C4-PFHpA	117%	20-150%
	13C8-PFOA	115%	20-150%
	13C9-PFNA	114%	20-150%
	13C6-PFDA	113%	20-150%
	13C7-PFUnDA	116%	20-150%
	13C2-PFDoDA	115%	20-150%
	13C2-PFTeDA	108%	20-150%
	13C3-PFBS	109%	20-150%
	13C3-PFHxS	109%	20-150%
	13C8-PFOS	114%	20-150%
	13C8-FOSA	80%	20-150%
	d3-MeFOSA	81%	20-150%
	d5-EtFOSA	88%	20-150%
	d3-MeFOSAA	122%	20-150%
	d5-EtFOSAA	110%	20-150%
	d7-MeFOSE	76%	20-150%
	d9-EtFOSE	89%	20-150%
	13C2-4:2FTS	111%	20-180%
	13C2-6:2FTS	118%	20-180%
	13C2-8:2FTS	122%	20-180%
	13C3-HFPO-DA	113%	20-150%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-BS	6Q18644.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

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	0.0527	105	40-150
307-24-4	Perfluorohexanoic acid	0.025	0.0262	105	40-150
375-85-9	Perfluoroheptanoic acid	0.025	0.0260	104	40-150
335-67-1	Perfluorooctanoic acid	0.025	0.0279	112	40-150
375-95-1	Perfluorononanoic acid	0.025	0.0256	102	40-150
335-76-2	Perfluorodecanoic acid	0.025	0.0264	106	40-150
2058-94-8	Perfluoroundecanoic acid	0.025	0.0275	110	40-150
307-55-1	Perfluorododecanoic acid	0.025	0.0266	106	40-150
72629-94-8	Perfluorotridecanoic acid	0.025	0.0266	106	40-150
376-06-7	Perfluorotetradecanoic acid	0.025	0.0263	105	40-150
375-73-5	Perfluorobutanesulfonic acid	0.0222	0.0224	101	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0235	0.0250	106	40-150
355-46-4	Perfluorohexanesulfonic acid	0.0229	0.0248	109	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0238	0.0239	100	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0232	0.0230	99	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0241	0.0232	96	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0241	0.0229	95	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0243	0.0235	97	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.0938	0.0973	104	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.095	0.107	113	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.096	0.0934	97	40-150
754-91-6	PFOSA	0.025	0.0249	100	40-150
31506-32-8	MeFOSA	0.05	0.0524	105	40-150
4151-50-2	EtFOSA	0.05	0.0510	102	40-150
2355-31-9	MeFOSAA	0.025	0.0281	112	40-150
2991-50-6	EtFOSAA	0.025	0.0277	111	40-150
24448-09-7	MeFOSE	0.125	0.128	102	40-150
1691-99-2	EtFOSE	0.125	0.127	102	40-150
13252-13-6	HFPO-DA (GenX)	0.05	0.0519	104	40-150
919005-14-4	ADONA	0.0473	0.0515	109	40-150
377-73-1	PFMPA	0.05	0.0264	53	40-150
863090-89-5	PFMBA	0.05	0.0556	111	40-150
151772-58-6	NFDHA	0.05	0.0535	107	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0468	0.0512	110	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0473	0.0499	106	40-150

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-BS	6Q18644.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
113507-82-7	PFEESA	0.0445	0.0480	108	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.125	0.0580	46	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.625	0.602	96	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.625	0.632	101	40-150

CAS No.	ID Standard Recoveries	BSP	Limits
	13C4-PFBA	27%	20-150%
	13C5-PFPeA	104%	20-150%
	13C5-PFHxA	112%	20-150%
	13C4-PFHpA	110%	20-150%
	13C8-PFOA	109%	20-150%
	13C9-PFNA	108%	20-150%
	13C6-PFDA	106%	20-150%
	13C7-PFUnDA	105%	20-150%
	13C2-PFDoDA	105%	20-150%
	13C2-PFTeDA	100%	20-150%
	13C3-PFBS	110%	20-150%
	13C3-PFHxS	106%	20-150%
	13C8-PFOS	119%	20-150%
	13C8-FOSA	87%	20-150%
	d3-MeFOSA	91%	20-150%
	d5-EtFOSA	93%	20-150%
	d3-MeFOSAA	115%	20-150%
	d5-EtFOSAA	111%	20-150%
	d7-MeFOSE	77%	20-150%
	d9-EtFOSE	91%	20-150%
	13C2-4:2FTS	118%	20-180%
	13C2-6:2FTS	108%	20-180%
	13C2-8:2FTS	120%	20-180%
	13C3-HFPO-DA	108%	20-150%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-MS	6Q18656.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279
FC6325-1	6Q18655.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

CAS No.	Compound	FC6325-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
375-22-4	Perfluorobutanoic acid	0.015	U	0.0926	0.102	110	40-150
2706-90-3	Perfluoropentanoic acid	0.0012	J	0.0463	0.0508	107	40-150
307-24-4	Perfluorohexanoic acid	0.00088	J	0.0231	0.0259	108	40-150
375-85-9	Perfluoroheptanoic acid	0.00056	J	0.0231	0.0248	105	40-150
335-67-1	Perfluorooctanoic acid	0.0012	J	0.0231	0.0264	109	40-150
375-95-1	Perfluorononanoic acid	0.0036	U	0.0231	0.0254	110	40-150
335-76-2	Perfluorodecanoic acid	0.0036	U	0.0231	0.0241	104	40-150
2058-94-8	Perfluoroundecanoic acid	0.0036	U	0.0231	0.0235	102	40-150
307-55-1	Perfluorododecanoic acid	0.0036	U	0.0231	0.0264	114	40-150
72629-94-8	Perfluorotridecanoic acid	0.0036	U	0.0231	0.0258	111	40-150
376-06-7	Perfluorotetradecanoic acid	0.0036	U	0.0231	0.0268	116	40-150
375-73-5	Perfluorobutanesulfonic acid	0.00064	J	0.0205	0.0226	107	40-150
2706-91-4	Perfluoropentanesulfonic acid	0.0045	U	0.0218	0.0230	106	40-150
355-46-4	Perfluorohexanesulfonic acid	0.00079	J	0.0212	0.0224	102	40-150
375-92-8	Perfluoroheptanesulfonic acid	0.0036	U	0.0221	0.0234	106	40-150
1763-23-1	Perfluorooctanesulfonic acid	0.0036	U	0.0215	0.0250	116	40-150
68259-12-1	Perfluorononanesulfonic acid	0.0036	U	0.0223	0.0229	103	40-150
335-77-3	Perfluorodecanesulfonic acid	0.0036	U	0.0223	0.0231	103	40-150
79780-39-5	Perfluorododecanesulfonic aci	0.0045	U	0.0225	0.0227	101	40-150
757124-72-4	4:2 Fluorotelomer sulfonate	0.018	U	0.0868	0.0939	108	40-150
27619-97-2	6:2 Fluorotelomer sulfonate	0.018	U	0.088	0.105	119	40-150
39108-34-4	8:2 Fluorotelomer sulfonate	0.018	U	0.0889	0.0987	111	40-150
754-91-6	PFOSA	0.0036	U	0.0231	0.0255	110	40-150
31506-32-8	MeFOSA	0.0073	U	0.0463	0.0494	107	40-150
4151-50-2	EtFOSA	0.0073	U	0.0463	0.0473	102	40-150
2355-31-9	MeFOSAA	0.0045	U	0.0231	0.0263	114	40-150
2991-50-6	EtFOSAA	0.0045	U	0.0231	0.0299	129	40-150
24448-09-7	MeFOSE	0.036	U	0.116	0.124	107	40-150
1691-99-2	EtFOSE	0.036	U	0.116	0.118	102	40-150
13252-13-6	HFPO-DA (GenX)	0.0036	U	0.0463	0.0520	112	40-150
919005-14-4	ADONA	0.0073	U	0.0438	0.0486	111	40-150
377-73-1	PFMPA	0.0073	U	0.0463	0.0487	105	40-150
863090-89-5	PFMBA	0.0073	U	0.0463	0.0504	109	40-150
151772-58-6	NFDHA	0.0073	U	0.0463	0.0527	114	40-150
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0073	U	0.0433	0.0491	113	40-150
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0073	U	0.0438	0.0451	103	40-150

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-MS	6Q18656.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279
FC6325-1	6Q18655.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

CAS No.	Compound	FC6325-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
113507-82-7	PFEESA	0.0073	U	0.0412	0.0465	113	40-150
356-02-5	3:3 Fluorotelomer carboxylate	0.018	U	0.116	0.0921	80	40-150
914637-49-3	5:3 Fluorotelomer carboxylate	0.091	U	0.579	0.599	104	40-150
812-70-4	7:3 Fluorotelomer carboxylate	0.091	U	0.579	0.636	110	40-150

CAS No.	ID Standard Recoveries	MS	FC6325-1	Limits
	13C4-PFBA	76%	101%	20-150%
	13C5-PFPeA	116%	113%	20-150%
	13C5-PFHxA	112%	115%	20-150%
	13C4-PFHpA	116%	115%	20-150%
	13C8-PFOA	118%	115%	20-150%
	13C9-PFNA	113%	109%	20-150%
	13C6-PFDA	113%	112%	20-150%
	13C7-PFUnDA	116%	114%	20-150%
	13C2-PFDoDA	104%	103%	20-150%
	13C2-PFTeDA	98%	100%	20-150%
	13C3-PFBS	107%	117%	20-150%
	13C3-PFHxS	108%	108%	20-150%
	13C8-PFOS	113%	106%	20-150%
	13C8-FOSA	97%	94%	20-150%
	d3-MeFOSA	97%	89%	20-150%
	d5-EtFOSA	100%	91%	20-150%
	d3-MeFOSAA	115%	111%	20-150%
	d5-EtFOSAA	108%	111%	20-150%
	d7-MeFOSE	91%	81%	20-150%
	d9-EtFOSE	104%	91%	20-150%
	13C2-4:2FTS	112%	117%	20-180%
	13C2-6:2FTS	101%	118%	20-180%
	13C2-8:2FTS	115%	124%	20-180%
	13C3-HFPO-DA	114%	111%	20-150%

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-DUP1	6Q18658.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279
FC6325-2	6Q18657.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

CAS No.	Compound	FC6325-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
375-22-4	Perfluorobutanoic acid	0.014 U		ND		nc	30
2706-90-3	Perfluoropentanoic acid	0.0070 U		ND		nc	30
307-24-4	Perfluorohexanoic acid	0.0035 U		ND		nc	30
375-85-9	Perfluoroheptanoic acid	0.0035 U		ND		nc	30
335-67-1	Perfluorooctanoic acid	0.0035 U		ND		nc	30
375-95-1	Perfluorononanoic acid	0.0035 U		ND		nc	30
335-76-2	Perfluorodecanoic acid	0.0035 U		ND		nc	30
2058-94-8	Perfluoroundecanoic acid	0.0035 U		ND		nc	30
307-55-1	Perfluorododecanoic acid	0.0035 U		ND		nc	30
72629-94-8	Perfluorotridecanoic acid	0.0035 U		ND		nc	30
376-06-7	Perfluorotetradecanoic acid	0.0035 U		ND		nc	30
375-73-5	Perfluorobutanesulfonic acid	0.0035 U		ND		nc	30
2706-91-4	Perfluoropentanesulfonic acid	0.0044 U		ND		nc	30
355-46-4	Perfluorohexanesulfonic acid	0.0035 U		ND		nc	30
375-92-8	Perfluoroheptanesulfonic acid	0.0035 U		ND		nc	30
1763-23-1	Perfluorooctanesulfonic acid	0.0035 U		ND		nc	30
68259-12-1	Perfluorononanesulfonic acid	0.0035 U		ND		nc	30
335-77-3	Perfluorodecanesulfonic acid	0.0035 U		ND		nc	30
79780-39-5	Perfluorododecanesulfonic aci	0.0044 U		ND		nc	30
757124-72-4	4:2 Fluorotelomer sulfonate	0.018 U		ND		nc	30
27619-97-2	6:2 Fluorotelomer sulfonate	0.018 U		ND		nc	30
39108-34-4	8:2 Fluorotelomer sulfonate	0.018 U		ND		nc	30
754-91-6	PFOSA	0.0035 U		ND		nc	30
31506-32-8	MeFOSA	0.0070 U		ND		nc	30
4151-50-2	EtFOSA	0.0070 U		ND		nc	30
2355-31-9	MeFOSAA	0.0044 U		ND		nc	30
2991-50-6	EtFOSAA	0.0044 U		ND		nc	30
24448-09-7	MeFOSE	0.035 U		ND		nc	30
1691-99-2	EtFOSE	0.035 U		ND		nc	30
13252-13-6	HFPO-DA (GenX)	0.0035 U		ND		nc	30
919005-14-4	ADONA	0.0070 U		ND		nc	30
377-73-1	PFMPA	0.0070 U		ND		nc	30
863090-89-5	PFMBA	0.0070 U		ND		nc	30
151772-58-6	NFDHA	0.0070 U		ND		nc	30
756426-58-1	9Cl-PF3ONS (F-53B Major)	0.0070 U		ND		nc	30
763051-92-9	11Cl-PF3OUdS (F-53B Minor)	0.0070 U		ND		nc	30

* = Outside of Control Limits.

Duplicate Summary

Job Number: FC6325
Account: AECOMCOD AECOM, INC.
Project: N6274223F0104 RH Fire Suppression System

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP97092-DUP1	6Q18658.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279
FC6325-2	6Q18657.D	1	06/01/23	MV	05/26/23	OP97092	S6Q279

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

FC6325-1, FC6325-2, FC6325-3

CAS No.	Compound	FC6325-2 ug/l	Q	DUP ug/l	Q	RPD	Limits
113507-82-7	PFEESA	0.0070	U	ND		nc	30
356-02-5	3:3 Fluorotelomer carboxylate	0.018	U	ND		nc	30
914637-49-3	5:3 Fluorotelomer carboxylate	0.088	U	ND		nc	30
812-70-4	7:3 Fluorotelomer carboxylate	0.088	U	ND		nc	30

CAS No.	ID Standard Recoveries	DUP	FC6325-2	Limits
	13C4-PFBA	112%	114%	20-150%
	13C5-PFPeA	121%	119%	20-150%
	13C5-PFHxA	121%	117%	20-150%
	13C4-PFHpA	119%	121%	20-150%
	13C8-PFOA	119%	117%	20-150%
	13C9-PFNA	112%	112%	20-150%
	13C6-PFDA	112%	118%	20-150%
	13C7-PFUnDA	108%	112%	20-150%
	13C2-PFDoDA	98%	108%	20-150%
	13C2-PFTeDA	101%	102%	20-150%
	13C3-PFBS	117%	122%	20-150%
	13C3-PFHxS	113%	116%	20-150%
	13C8-PFOS	117%	113%	20-150%
	13C8-FOSA	91%	97%	20-150%
	d3-MeFOSA	94%	92%	20-150%
	d5-EtFOSA	95%	97%	20-150%
	d3-MeFOSAA	121%	116%	20-150%
	d5-EtFOSAA	115%	106%	20-150%
	d7-MeFOSE	92%	93%	20-150%
	d9-EtFOSE	103%	103%	20-150%
	13C2-4:2FTS	121%	129%	20-180%
	13C2-6:2FTS	122%	124%	20-180%
	13C2-8:2FTS	119%	119%	20-180%
	13C3-HFPO-DA	120%	118%	20-150%

* = Outside of Control Limits.