AECOM 716-856-5636
257 West Genesee Street, Suite 400 716-856-2545
Buffalo, New York 14202

October 9, 2018

Mr. Glenn May, P.G.
Division of Environmental Remediation, Region 9
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203-7226
glenn.may@dec.ny.gov

Subject: **Former Scott Aviation Site, Lancaster, Erie County, New York**
NYSDEC Registry Site No. 915149
Summary of Emerging Contaminants Groundwater Sampling

Dear Mr. May:

On behalf of Scott Figgie LLC (successor to Scott Technologies, Inc., which was a successor to Figgie International; Scott Technologies, Inc. was sold to Zodiac Acquisitions Corporation in 2004, and the facility is now occupied by AVOX Systems Inc), AECOM Technical Services, Inc. (AECOM) submits this letter report on the results from the completed emerging contaminants groundwater sampling that was completed at the Former Scott Aviation Facility Site (the "Site") in Lancaster, New York (Figure 1 – Site Location Map).

The sampling was completed in response to the New York State Department of Environmental Conservation (NYSDEC) letter request of July 3, 2018, directing emerging contaminants (1,4-dioxane and Per- and polyfluoroalkyl substances (PFAS)) groundwater sampling at the Site. In response to the leter, AECOM submitted Emerging Contaminants Groundwater Sampling Work Plan (Work Plan) to NYSDEC On July 20, 2018. NYSDEC approved the Work Plan on August 10, 2018. This Work Plan was used in conjunction with the NYSDEC-approved Remedial Design Work Plan (RDWP) (Earth Tech, November 2003), which is the current document guiding groundwater sampling at the Site.

This letter report has been prepared to transmit a summary of the work described above.

Sampling Summary

To meet NYSDEC's requirement to evaluate for the presence of 1,4-dioxane and PFAS at the Site, groundwater samples were collected in accordance with the Work Plan from three existing overburden monitoring wells (MW-2, MW-3, and MW-16S) on August 23, 2018. Figure 2 depicts the location of the sampled monitoring wells.

The groundwater sample from each well was submitted to TestAmerica Laboratories, Inc. (TAL), a New York State Department of Health Environmental Laboratory Approval Program-(ELAP) approved analytical laboratory, for analysis of the following parameters:

- 1,4-dioxane by EPA Method 8270 Selective Ion Monitoring (SIM) analyzed by TAL Buffalo, New York: and,
- 21 PFAS compounds by United States Environmental Protection Agency (EPA) Method 537 Modified (low level) analyzed by TAL Sacramento, California.

Groundwater sampling logs are provided in Attachment 1 and the PFAS Sampling Checklist is provided in Attachment 2.

Purged groundwater was collected and treated through the on-site groundwater treatment system and discharged to the Buffalo Sewer Authority (BSA) sanitary sewer system under BSA Permit No. 15-10-E4054.

Groundwater Sample Analytical Results Summary

1,4-dioxane

As presented in the attached analytical summary table (Table 1), 1,4-dioxane was detected at each well at concentrations ranging from 42 micrograms/liter (µg/L) to 620 µg/L. There is currently no groundwater standard for 1,4-dioxane; therefore, the concentrations were compared to the NYSDEC principal organic contaminant standard (POCS)[1] for groundwater of 5 µg/L. The concentration of 1,4-dioxane at each well exceeded the POCS.

PFAS

As presented in the attached analytical summary table (Table 1), several PFAS compounds were detected at each well. NYSDEC follows the drinking water health advisory levels established by the United States Environmental Projection Agency (USEPA). The Health Advisory Levels are 70 nanograms per liter (ng/L) in Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS). USEPA advises, when both PFOA and PFOS are detected, the combined concentrations are to be compared to the 70 ng/L health advisory level. PFOA was detected in MW-2 and MW-3 and PFOS was detected in well MW-2 and MW-16S. Cencentrations did not exceed 70 ng/L of PFOA, PFOS, or the sum of both PFOA and PFOS in the groundwater from the sampled wells.

Quality Assurance

The contracted laboratory achieved the method detection limit of 2 nanograms/liter for each PFAS target analyte summarized in the Work Plan. Additionally, the contracted laboratory achieved the method detection limit of 0.28 micrograms/liter (µg/L) for 1,4-dioxane.

Quality control samples (i.e., matrix spike/matrix spike duplicate, field duplicate (MW-3), equipment blank, and ambient blank (PFAS); a trip balank was not reequired) were collected.

The PFAS samples were received at TAL Sacramento outside the required temperature criteria. AECOM informed NYSDEC. NYSDEC advised AECOM to have the samples analyzed.

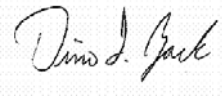
EQuIS

Per the July 3, 2018 NYSDEC correspondence, "…analytical results from this sampling need to be submitted to the DEC in both an Adobe Acrobat "pdf" and electronic data deliverable (EDD) formats, the latter for upload into the NYSDEC's Environmental Information Management System (EIMS). The EIMS uses the database software application EQuIS™ from EarthSoft ® Inc." The laboratory results in Adobe Acrobat are provided as Attachment 3. The EDD was provided to NYSDEC via electronic mail on September 26, 2018 and successfully uploaded to to EIMS on September 27, 2018.

[1] Reference for NYSDEC POCS: NYSDEC Technical Operational and Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998.

If you have any questions or comments, please contact me via email at dino.zack@aecom.com or telephone at (716) 856-5636.

Sincerely yours,



Dino Zack, PG, STS
Project Manager
dino.zack@aecom.com

Attachments:
Table 1
Figures 1 and 2
Attachment 1 – Sample Logs
Attachment 2 – PFAS Sampling Checklist
Attachment 3 – Laboratory Report

cc:

Mr. Stuart Rixman, GSF Management Company, LLC (electronic copy)
Mr. Troy Chute, GSF Management Company, LLC (electronic copy)
Mr. Christopher Bourne, AVOX Systems Inc. (electronic copy)
Mr. Michael Cruden, NYSDEC, Director, Remedial Bureau E (electronic copy)
Mr. Stanley Radon, NYSDEC, Engineering Geologist III, R9 (electronic copy)
Project File 60538931

Table

Table 1

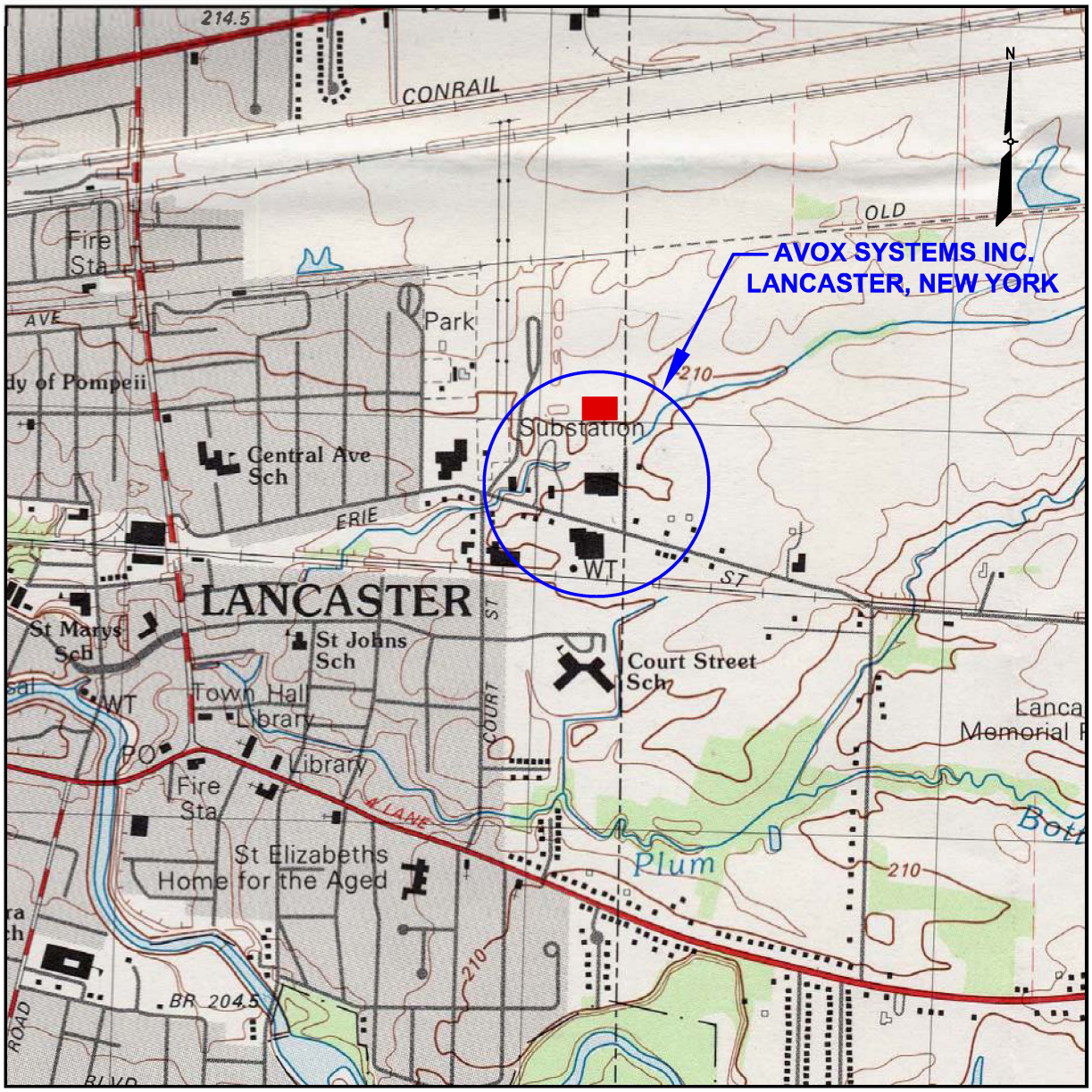
Analytical Summary Table

Former Scott Aviation Facility
NYSDEC Registry Site No. 915149

Method/Parameter	Group	Units	Standard/ Drinking Water Health Advisotry	MW-2	MW-3	Duplicate of MW-3	MW-16S	Ambient Blank	Equipment Blank
SW846-8260C SIM									
1,4-Dioxane		ug/L	5[1]	190 E	580 E	620 E	42 E	NA	0.42
EPA 537 Modified, Perfluorinated Alkyl Acids (PFOAs)									
Perfluorobutanesulfonic acid (PFBS)	Perfluoroalkyl sultonates	ng/L	NA	0.68 J	ND	ND	ND	ND	ND
Perfluorohexanesulfonic acid (PFHxS)		ng/L	NA	0.21 JB	0.38 JB	0.41 JB	0.33 JB	0.24 JB	0.270 JB
Perfluoroheptanesulfonic acid (PFHpS)		ng/L	NA	ND	ND	ND	ND	ND	ND
Perfluorooctanesulfonic acid (PFOS)		ng/L	70[2]	1.5 J	ND	0.49 J	0.54 J	ND	ND
Perfluorodecanesulfonic acid (PFDS)		ng/L	NA	ND	ND	ND	ND	ND	ND
Perfluorobutanoic acid (PFBA)	Perfluoroalkyl carboxylates	ng/L	NA	84	36	34	84	9.2	6.9
Perfluoropentanoic acid (PFPeA)		ng/L	NA	1.7	0.90 J	1.3 J	1.3 J	ND	ND
Perfluorohexanoic acid (PFHxA)		ng/L	NA	1.7	1.1 J	1.2 J	ND	ND	ND
Perfluoroheptanoic acid (PFHpA)		ng/L	NA	0.81 J	0.53 J	0.45 J	ND	ND	ND
Perfluorooctanoic acid (PFOA)		ng/L	70[2]	2.1	1.4 J	1.6 J	ND	ND	ND
Perfluorononanoic acid (PFNA)		ng/L	NA	0.26 J	ND	ND	0.36 J	ND	ND
Perfluorodecanoic acid (PFDA)		ng/L	NA	ND	ND	ND	0.36 J	ND	ND
Perfluoroundecanoic acid (PFUnA)		ng/L	NA	ND	ND	ND	ND	ND	ND
Perfluoroundecanoic acid (PFUnA)		ng/L	NA	ND	ND	ND	ND	ND	ND
Perfluorotridecanoic acid (PFTriA)		ng/L	NA	ND	ND	ND	ND	ND	ND
Perfluorotetradecanoic acid (PFTeA)		ng/L	NA	ND	ND	ND	ND	ND	ND
6:2 Fluorotelomer sulfonate (6:2 FTS)	Fluorinated Telomer Sulfonates	ng/L	NA	ND	ND	ND	ND	ND	ND
8:2 Fluorotelomer sulfonate (8:2 FTS)		ng/L	NA	ND	ND	ND	ND	ND	ND
Perfluorooctanesulfonamide (FOSA)	Perfluorooctanesulfonamide	ng/L	NA	ND	ND	ND	ND	ND	ND
N-methyl perfluorooctanesulfonamidoacetic acid	Perfluorooctanesulfonamidoacetic acids	ng/L	NA	ND	ND	ND	ND	ND	ND
N-ethyl perlfuorooctanesulfonamidoaceetic acid		ng/L	NA	ND	ND	ND	ND	ND	ND
Sum of PFOS AND PFOA concentrations	--	ng/L	70[2]	3.6	1.4	2.1	0.5	0.0	0.0

Notes:
1 - Principal organic standard.
2 - USEPA health advisory level (https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos)
ug/L - micrograms per liter (parts per billion)
ng/L - nanograms per liter (parts per trillion)
E - Result exceeded calibration range.
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Compound was found in the blank and sample.
ND - Not Detected at the reporting limit or method detection limit.
NA - Not Applicable

Figures



SOURCE:
1982 GEOLOGIC SURVEY 7.5 X 15 MINUTE TOPOGRAPHIC QUADRANGLE
LANCASTER, NEW YORK

LEGEND

AVOX PLANT 3 ADDED AFTER PUBLICATION OF LANCASTER, NEW YORK TOPOGRAPHIC QUADRANGLE.

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SCALE IN FEET

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FIGURE 1
SITE LOCATION MAP

FORMER SCOTT AVIATION FACILITY
LANCASTER, NEW YORK

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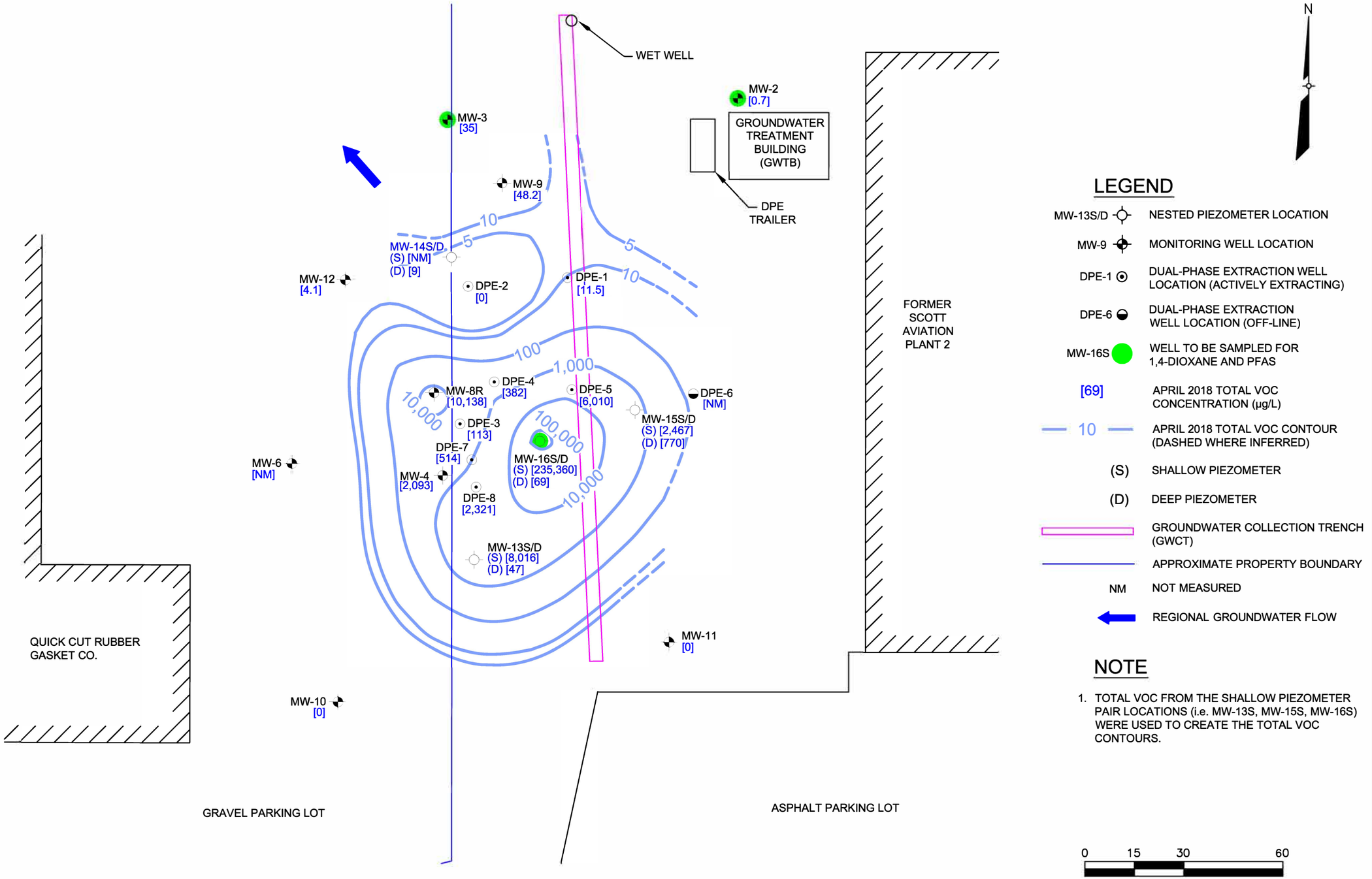

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FIGURE 2
LOCATION OF SAMPLED WELLS

FORMER SCOTT AVIATION FACILITY
LANCASTER, NEW YORK

Attachment 1

Sample Logs

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GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 7/13/2018
Field Personnel: ELA, SC
Site Name: **Former Scott Aviation Site - Lancaster, NY**
Job #: **60538931**
Well ID #: MW-2
x Upgradient ____ Downgradient
Weather Conditions: Sunny
Air Temperature: 75 ° F

Total Depth (TWD) Below Top of Casing = 16.4 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 6.02 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.38 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.7 gal
3 Casing Volumes = 5.1 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Poly Tubing
Total Volume of Water Removed: 5.0 gal

Casing Diameter: 2 inches
Casing Material: PVC
Measuring Point Elevation: 690.35 1/100 ft
Height of Riser (above land surface): ____ 1/100 ft
Land Surface Elevation: ____ 1/100 ft
Screened Interval (below land surface): 7-17 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	Dup - MS/MSD
250 mL HDPE	21 PFAs list	2	HCL, 4°C	Ambient Blank, MS/MSD
1 L Amber Glass	1,4-Dioxane	2	HCL, 4°C	MS/MSD

FIELD ANALYSES

Flow Rate (ml/min)	270	270	270	270	270	270	270	200
Time (Military)	9:40	9:45	9:55	10:05	10:15	10:25	10:35	10:40
Depth to Groundwater Below Top of Casing (ft)	8.45	9.90	10.75	11.51	12.31	13.22	14.01	14.34
Drawdown (ft)	-2.43	-1.45	-0.85	-0.76	-0.80	-0.91	-0.79	-0.33
pH (S.U.)	7.97	7.79	7.91	7.64	7.61	7.62	7.54	7.51
Sp. Cond. (mS/cm)	0.950	0.860	0.650	0.670	0.700	0.670	0.76	0.79
Turbidity (NTUs)	4.39	4.18	5.96	5.14	3.04	2.33	1.74	2.44
Dissolved Oxygen (mg/L)	2.19	1.27	0.86	0.97	0.91	0.64	0.55	0.5
Water Temperature (°C)	16.1	16.2	17	17.3	16.7	16.3	16.0	15.9
ORP (mV)	-168.4	-180.5	-210.5	-204.1	-202.1	-189.8	-175.3	-168.0

Physical appearance at start: Color clear; Odor no; Sheen/Free Product no

Physical appearance at sampling: Color clear; Odor no; Sheen/Free Product no

COMMENTS/OBSERVATIONS: Sample time at 11:00 hrs. Samples for PFAs, removed PFAs from area; Ambient Blank collected 11:15 hrs, Then samples for 1,4-Dioxane. MS/MSD collected.

AECOM

GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 7/13/2018
Field Personnel: ELA, SC
Site Name: **Former Scott Aviation Site - Lancaster, NY**
Job #: **60538931**
Well ID #: MW-2
x Upgradient ____ Downgradient
Weather Conditions: Sunny
Air Temperature: 75 ° F

Total Depth (TWD) Below Top of Casing = 16.4 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 6.02 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.38 1/100 ft
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Method of Sample Collection: Peristaltic Pump/Poly Tubing
Total Volume of Water Removed: 5.0 gal

Casing Diameter: 2 inches
Casing Material: PVC
Measuring Point Elevation: 690.35 1/100 ft
Height of Riser (above land surface): ____ 1/100 ft
Land Surface Elevation: ____ 1/100 ft
Screened Interval (below land surface): 7-17 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	Dup - MS/MSD
250 mL HDPE	21 PFAs list	2	HCL, 4°C	Ambient Blank, MS/MSD
1 L Amber Glass	1,4-Dioxane	2	HCL, 4°C	MS/MSD

FIELD ANALYSES

Flow Rate (ml/min)	200	200	200					
Time (Military)	10:45	10:50	10:55					
Depth to Groundwater Below Top of Casing (ft)	14.58	14.88	15.05					
Drawdown (ft)	-0.24	-0.30	-0.17					
pH (S.U.)	7.50	7.49	7.48					
Sp. Cond. (mS/cm)	0.83	0.87	0.92					
Turbidity (NTUs)	3.00	1.41	1.82					
Dissolved Oxygen (mg/L)	0.41	0.34	0.34					
Water Temperature (°C)	15.9	15.9	16.0					
ORP (mV)	-168.2	-156.7	-147.7					

Physical appearance at start: Color clear; Odor no; Sheen/Free Product no

Physical appearance at sampling: Color clear; Odor no; Sheen/Free Product no

COMMENTS/OBSERVATIONS: Sample time at 11:00 hrs. Samples for PFAs, removed PFAs from area; Ambient Blank collected 11:15 hrs, Then samples for 1,4-Dioxane. MS/MSD collected.

AECOM

GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/23/2018
Field Personnel: ELA, SC
Site Name: **Former Scott Aviation Site - Lancaster, NY**
Job #: **60538931**
Well ID #: MW-3
Upgradient / Downgradient
Weather Conditions: Partly Cloudy
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 28 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 11.24 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 16.76 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.7 gal
3 Casing Volumes = 8.2 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Poly Tubing
Total Volume of Water Removed: 8.2 gal

Casing Diameter: 2 inches
Casing Material: PVC
Measuring Point Elevation: 687.05 1/100 ft
Height of Riser (above land surface): 1.15 1/100 ft
Land Surface Elevation: 685.9 1/100 ft
Screened Interval (below land surface): 7.5 - 27.5 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	Dup - MS/MSD
250 mL HDPE	21 PFAs list	2	HCL, 4°C	DUP
1 L Amber Glass	1,4-Dioxane	2	HCL, 4°C	DUP

FIELD ANALYSES

Flow Rate (ml/min)	300	300	300	300	300	300	275	275
Time (Military)	11:50	12:00	12:10	12:20	12:30	12:40	12:50	13:00
Depth to Groundwater Below Top of Casing (ft)	12.05	13.55	14.35	15.25	16.05	17.00	17.70	18.25
Drawdown (ft)	-0.81	-1.50	-0.80	-0.90	-0.80	-0.95	-0.70	-0.55
pH (S.U.)	8.1	8.05	8.04	7.96	7.9	7.94	8.00	8.07
Sp. Cond. (mS/cm)	0.83	0.82	0.81	0.85	0.90	0.88	0.84	0.79
Turbidity (NTUs)	115	24.7	12.0	9.76	2.93	2.07	2.12	0.92
Dissolved Oxygen (mg/L)	1.38	0.36	0.23	0.56	0.41	0.31	0.24	0.14
Water Temperature (°C)	12.6	12.3	12.40	12.9	12.8	12.5	12.5	12.5
ORP (mV)	-82.4	-86.5	-92.5	-59.5	-67.4	-97.4	-110.4	-123.1

Physical appearance at start — Color: clear w/ little iron bacteria; Odor: no; Sheen/Free Product: no

Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no

COMMENTS/OBSERVATIONS: Sample time at 13:45 hrs. Duplicate Collected. Duplicate time listed at 12:00 hrs.

AECOM

GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/23/2018
Field Personnel: ELA, SC
Site Name: **Former Scott Aviation Site - Lancaster, NY**
Job #: **60538931**
Well ID #: MW-3
Upgradient / Downgradient
Weather Conditions: Partly Cloudy
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 28 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 11.24 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 16.76 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.7 gal
3 Casing Volumes = 8.2 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Poly Tubing
Total Volume of Water Removed: 8.2 gal

Casing Diameter: 2 inches
Casing Material: PVC
Measuring Point Elevation: 687.05 1/100 ft
Height of Riser (above land surface): 1.15 1/100 ft
Land Surface Elevation: 685.9 1/100 ft
Screened Interval (below land surface): 7.5 - 27.5 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	Dup - MS/MSD
250 mL HDPE	21 PFAs list	2	HCL, 4°C	DUP
1 L Amber Glass	1,4-Dioxane	2	HCL, 4°C	DUP

FIELD ANALYSES

Flow Rate (ml/min)	275	275	275	275	275			
Time (Military)	13:10	13:20	13:30	13:35	13:40			
Depth to Groundwater Below Top of Casing (ft)	18.70	19.10	19.65	19.95	20.23			
Drawdown (ft)	-0.45	-0.40	-0.55	-0.30	-0.28			
pH (S.U.)	8.06	8.05	8.06	8.06	8.07			
Sp. Cond. (mS/cm)	0.80	0.81	0.81	0.81	0.82			
Turbidity (NTUs)	0.51	4.03	1.64	1.19	1.23			
Dissolved Oxygen (mg/L)	0.16	0.16	0.21	0.22	0.23			
Water Temperature (°C)	12.5	12.5	12.5	12.5	12.8			
ORP (mV)	-121.3	-114.3	-110.6	-108.8	-108.2			

Physical appearance at start — Color: clear w/ little iron bacteria; Odor: no; Sheen/Free Product: no
Physical appearance at sampling — Color: clear; Odor: no; Sheen/Free Product: no

COMMENTS/OBSERVATIONS: Sample time at 13:45 hrs. Duplicate Collected. Duplicate time listed at 12:00 hrs.

AECOM

GROUNDWATER SAMPLING LOG

Date (mo/day/yr): 8/23/2018
Field Personnel: ELA, SC
Site Name: **Former Scott Aviation Site - Lancaster, NY**
Job #: **60538931**
Well ID #: MW-16S
Upgradient: ____ X Downgradient
Weather Conditions: Sunny
Air Temperature: 75 ° F
Total Depth (TWD) Below Top of Casing = 15.4 1/100 ft
Depth to Groundwater (DGW) Below Top of Casing = 8.90 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 6.71 1/100 ft
1 Casing Volume (OCV) = LWC x 0.041 = 0.3 gal
3 Casing Volumes = 0.8 gal
Method of Well Evacuation: Peristaltic Pump
Method of Sample Collection: Peristaltic Pump/Poly Tubing
Total Volume of Water Removed: 0.8 gal

Casing Diameter: 1 inches
Casing Material: PVC
Measuring Point Elevation: 688.15 1/100 ft
Height of Riser (above land surface): 2.46 1/100 ft
Land Surface Elevation: 685.69 1/100 ft
Screened Interval (below land surface): 12 - 18 1/100 ft

Container	Analysis (Method)	# Bottles	Preservative	Dup - MS/MSD
250 mL HDPE	21 PFAs list	2	HCL, 4°C	
1 L Amber Glass	1,4-Dioxane	2	HCL, 4°C	

FIELD ANALYSES

Flow Rate (ml/min)	150	150	150	150	150			
Time (Military)	14:20	14:25	14:30	15:40	17:00			
Depth to Groundwater Below Top of Casing (ft)	9.80	13.15	15.40	14.20	15.4			
Drawdown (ft)	-0.90	-3.35	-2.25	--	--			
pH (S.U.)	7.87	7.82	7.78	7.54	7.51			
Sp. Cond. (mS/cm)	1.85	1.82	2.00	2.37	2.44			
Turbidity (NTUs)	19.3	13.0	25.5	96.1	57.2			
Dissolved Oxygen (mg/L)	1.92	0.53	0.52	0.95	0.70			
Water Temperature (°C)	15.1	14.6	14.3	15.3	15.6			
ORP (mV)	-168.9	-167.7	-168.9	-157.2	-140.6			

Physical appearance at start — Color: clear; Odor: yes; Sheen/Free Product: no

Physical appearance at sampling — Color: clear; Odor: yes; Sheen/Free Product: no

COMMENTS/OBSERVATIONS: Start purge at 14:17 hrs. Dry at 14:30hrs. Let recaharge. Water level = 14.2 ft btic at 15:40; restart pump. Dry at 15:45. Let recharge. Water level = 14.29 at 16:55 hrs. restart pump, dry at 17:00 hrs. Let recharge overnight. 8/24/18 Well recovered to 10.43 ft btic. Grab sample start at 8:25 hrs.

Attachment 2

PFAS Sampling Checklist

PFAS Sampling Checklist

Project No.: 60538931-1
Project Location: Lancaster NY (Scott Figgie West of Plant 2)
Signature: Emily Au
Date: 8/23/2018

Team Members

Yes	**No**	**Description**
		Has AECOM PFAS Sampling guidance been reviewed by all team members?
		Comments:
Yes	**No**	Has AECOM field sampling staff received needed training certification?
		Comments:
Yes	**No**	Was a briefing held for field sampling staff?
		Comments:
Yes	**No**	Were additional PFAS sampling instructions given to field sampling staff?
		Comments: *Keep 1,4-Dioxane in separate coolers (teflon cap), Sample separate of PFAs.*
Yes	**No**	Have personal clothing and PPE requirements been followed by all field sampling staff?
		Comments: *No Lotions or cosmetics.*
Yes	**No**	Were lotions and sunscreen used for field sampling staff?
		Comment:

Sample Collection

Yes	**No**	Has a PFAS-free water source been identified?
		Comment *Lab provided.*
		Source of PFAS-free water:
Yes	**No**	Have all sampling items, parts and equipment been inspected to be free of PFAS?
		Comment:
Yes	**No**	Has sampling location sequence been communicated to avoid cross-contaminations?
		Comment:
Yes	**No**	Have drilling fluids been evaluated and shown to be free of PFAS?
		Comment: *Not Applicable.*
Yes	**No**	Use of PFAS-free decontamination solution?
		Brand name of decontamination solution: *Alconcox.*
Yes	**No**	Have all field logs, notebooks, pens, labels been inspected, and do they meet AECOM PFAS sampling guidance requirements?
		Comment: *metal clipboard, ballpoint bic pen, loose paper for notes.*
Yes	**No**	Have all sample shipping materials (ice, Ziploc® bags or similar style bags) been inspected, and do they meet AECOM PFAS sampling guidance requirements?
		Comment: *PFAs put in lab-provided ziplocks.*
Yes	**No**	Have all blanks arrived at the site and will they be collected to verify cross-contamination?
		Comment:

Document Control

Yes	**No**	Have all variances from sampling guidance been documented?
		Comment:

Other Comments:

Attachment 3

Laboratory Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-140856-1
Client Project/Site: Scott Figgie West of Plant 2

For:
AECOM
257 West Genesee Street
Suite 400
Buffalo, New York 14202-2657

Attn: Mr. Dino Zack

Joseph V. Giacomazza

Authorized for release by:
9/13/2018 3:34:09 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Manager of Project Management
(716)504-9835
brian.fischer@testamericainc.com

Table of Contents

Definitions/Glossary

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-140856-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-140856-1

Comments
No additional comments.

Receipt
The samples were received on 8/24/2018 1:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.0º C and 2.2º C.

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: MW-2 (480-140857-1), MW-2 (480-140857-1[MS]), MW-2 (480-140857-1[MSD]), MW-3 (480-140857-2), AMBIENT BLANK-082318 (480-140857-3), DUPLICATE-082318 (480-140857-4), EQUIP BLANK082318 (480-140857-5) and MW-16S (480-140857-6). Received cooler out of acceptable temp. Ice had melted. Temp was 21.0C.

GC/MS Semi VOA
Method(s) 8270D SIM ID: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-2 (480-140856-1), MW-2 (480-140856-1[MS]), MW-2 (480-140856-1[MSD]), MW-3 (480-140856-2), DUPLICATE-082318 (480-140856-3) and MW-16S (480-140856-5). Elevated reporting limits (RLs) are provided.

Method(s) 8270D SIM ID: The 1,4-Dioxane result reported for samples MW-2 (480-140856-1), MW-2 (480-140856-1[MS]), MW-2 (480-140856-1[MSD]), MW-3 (480-140856-2), DUPLICATE-082318 (480-140856-3) and MW-16S (480-140856-5) have an E flag qualifier indicating the results are over the calibration range on the raw data. The actual amounts are within the calibration range; however, the E flag is generated based upon the bias corrected concentration. The LIMS system calculates a bias correction based on the recovery of the 1,4-Dioxane-d8 isotope.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS
Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2FTS in the following samples: MW-2 (480-140857-1), MW-2 (480-140857-1[MS]) and MW-2 (480-140857-1[MSD]). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2FTS in the following sample: MW-2 (480-140857-1[MSD]). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: MW-16S (480-140856-5).

Method(s) 3535: The following samples are orange with fine sediment at the bottom of the bottle prior to extraction: MW-2 (480-140857-1), MW-2 (480-140857-1[MS]), MW-2 (480-140857-1[MSD]) and MW-16S (480-140857-6).

Method(s) 3535: The following samples are yellow with particulates at the bottom of the bottle prior to extraction: MW-3 (480-140857-2) and DUPLICATE-082318 (480-140857-4).

Method(s) 3535: The following samples label did not match client's ID. Client's ID is MW-2S and Test America's ID label is missing the "S" on all three bottles: MW-2 (480-140857-1), MW-2 (480-140857-1[MS]) and MW-2 (480-140857-1[MSD]).

Method(s) 3535: The following sample(s) MW-16S (480-140857-6) had non-settleable particulate matter which plugged the SPE extraction disk. The amount of sample remaining plus the weight of the bottle are recorded in the "Notes" field of the prep batch. The "Tare Weight"

Job ID: 480-140856-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

recorded is the weight of the emptied bottle. As such, reporting limits (RLs) are not impacted.

Method(s) 3535: The following samples were yellow after extraction: MW-2 (480-140857-1), MW-2 (480-140857-1[MS]) and MW-2 (480-140857-1[MSD]).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: MW-2 — Lab Sample ID: 480-140856-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	190	E	21	10	ug/L	100		8270D SIM ID	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 480-140856-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	580	E	41	21	ug/L	200		8270D SIM ID	Total/NA

Client Sample ID: DUPLICATE-082318 — Lab Sample ID: 480-140856-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	620	E	40	20	ug/L	200		8270D SIM ID	Total/NA

Client Sample ID: EQUIP BLANK-082318 — Lab Sample ID: 480-140856-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.42		0.21	0.11	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: MW-16S — Lab Sample ID: 480-140856-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	42	E	4.5	2.2	ug/L	20		8270D SIM ID	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 480-140857-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	84		1.7	0.30	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.7		1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.7		1.7	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.81	J	1.7	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	2.1		1.7	0.73	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.26	J	1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.68	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.21	J B	1.7	0.15	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.5	J	1.7	0.47	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 480-140857-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	36		1.6	0.28	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.90	J	1.6	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.1	J	1.6	0.47	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.53	J	1.6	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.4	J	1.6	0.69	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.38	J B	1.6	0.14	ng/L	1		537 (modified)	Total/NA

Client Sample ID: AMBIENT BLANK-082318 — Lab Sample ID: 480-140857-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.2		1.6	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.24	J B	1.6	0.14	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: DUPLICATE-082318 — Lab Sample ID: 480-140857-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	34		1.7	0.29	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.3	J	1.7	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.2	J	1.7	0.48	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.45	J	1.7	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.6	J	1.7	0.70	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.41	J B	1.7	0.14	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.49	J	1.7	0.45	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EQUIP BLANK082318 — Lab Sample ID: 480-140857-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.9		2.0	0.34	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.27	J B	2.0	0.17	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-16S — Lab Sample ID: 480-140857-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	84		1.9	0.33	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.3	J	1.9	0.81	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.36	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.33	J B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.54	J	1.9	0.51	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: MW-2
Date Collected: 08/23/18 11:00
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-1
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	190	E	21	10	ug/L		08/27/18 08:03	09/04/18 17:54	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*22*		*15 - 110*	*08/27/18 08:03*	*09/04/18 17:54*	*100*

Client Sample ID: MW-3
Date Collected: 08/23/18 13:45
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-2
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	580	E	41	21	ug/L		08/27/18 08:03	09/04/18 18:17	200

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*21*		*15 - 110*	*08/27/18 08:03*	*09/04/18 18:17*	*200*

Client Sample ID: DUPLICATE-082318
Lab Sample ID: 480-140856-3
Date Collected: 08/23/18 12:00
Matrix: Water
Date Received: 08/24/18 13:15

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	620	E	40	20	ug/L		08/27/18 08:03	09/04/18 18:40	200

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*22*		*15 - 110*	*08/27/18 08:03*	*09/04/18 18:40*	*200*

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: EQUIP BLANK-082318
Date Collected: 08/23/18 15:55
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-4
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.42		0.21	0.11	ug/L		08/27/18 08:03	09/10/18 12:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*25*		*15 - 110*	*08/27/18 08:03*	*09/10/18 12:47*	*1*

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: MW-16S
Date Collected: 08/24/18 08:25
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-5
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	42	E	4.5	2.2	ug/L		08/27/18 08:03	09/04/18 19:04	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*22*		*15 - 110*	*08/27/18 08:03*	*09/04/18 19:04*	*20*

Client Sample ID: MW-2

Date Collected: 08/23/18 11:00
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**84**		1.7	0.30	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluoropentanoic acid (PFPeA)	**1.7**		1.7	0.42	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorohexanoic acid (PFHxA)	**1.7**		1.7	0.50	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluoroheptanoic acid (PFHpA)	**0.81**	**J**	1.7	0.22	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorooctanoic acid (PFOA)	**2.1**		1.7	0.73	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorononanoic acid (PFNA)	**0.26**	**J**	1.7	0.23	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorobutanesulfonic acid (PFBS)	**0.68**	**J**	1.7	0.17	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorohexanesulfonic acid (PFHxS)	**0.21**	**J B**	1.7	0.15	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorooctanesulfonic acid (PFOS)	**1.5**	**J**	1.7	0.47	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		09/06/18 03:43	09/06/18 21:56	1
Perfluorooctane Sulfonamide (FOSA)	ND		1.7	0.30	ng/L		09/06/18 03:43	09/06/18 21:56	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		09/06/18 03:43	09/06/18 21:56	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		09/06/18 03:43	09/06/18 21:56	1
6:2 FTS	ND		17	1.7	ng/L		09/06/18 03:43	09/06/18 21:56	1
8:2 FTS	ND		17	1.7	ng/L		09/06/18 03:43	09/06/18 21:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*31*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C5 PFPeA	*56*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C2 PFHxA	*76*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C4-PFHpA	*86*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C4 PFOA	*96*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C5 PFNA	*93*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C2 PFDA	*104*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C2 PFUnA	*100*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C2 PFDoA	*91*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C2-PFTeDA	*96*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C3-PFBS	*82*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
18O2 PFHxS	*92*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C4 PFOS	*93*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
13C8 FOSA	*95*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
d3-NMeFOSAA	*110*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
d5-NEtFOSAA	*117*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
M2-6:2FTS	*194*	*	*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*
M2-8:2FTS	*147*		*25 - 150*	*09/06/18 03:43*	*09/06/18 21:56*	*1*

Client Sample ID: MW-3

Date Collected: 08/23/18 13:45
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**36**		1.6	0.28	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluoropentanoic acid (PFPeA)	**0.90**	**J**	1.6	0.40	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorohexanoic acid (PFHxA)	**1.1**	**J**	1.6	0.47	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluoroheptanoic acid (PFHpA)	**0.53**	**J**	1.6	0.20	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorooctanoic acid (PFOA)	**1.4**	**J**	1.6	0.69	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.22	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.25	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.89	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.44	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.6	1.0	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.23	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.16	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorohexanesulfonic acid (PFHxS)	**0.38**	**J B**	1.6	0.14	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.15	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.44	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.26	ng/L		09/06/18 03:43	09/06/18 22:18	1
Perfluorooctane Sulfonamide (FOSA)	ND		1.6	0.28	ng/L		09/06/18 03:43	09/06/18 22:18	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		16	2.5	ng/L		09/06/18 03:43	09/06/18 22:18	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		16	1.5	ng/L		09/06/18 03:43	09/06/18 22:18	1
6:2 FTS	ND		16	1.6	ng/L		09/06/18 03:43	09/06/18 22:18	1
8:2 FTS	ND		16	1.6	ng/L		09/06/18 03:43	09/06/18 22:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*49*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C5 PFPeA	*76*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C2 PFHxA	*93*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C4-PFHpA	*97*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C4 PFOA	*105*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C5 PFNA	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C2 PFDA	*107*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C2 PFUnA	*106*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C2 PFDoA	*93*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C2-PFTeDA	*111*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C3-PFBS	*95*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
18O2 PFHxS	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C4 PFOS	*102*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
13C8 FOSA	*97*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
d3-NMeFOSAA	*109*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
d5-NEtFOSAA	*114*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
M2-6:2FTS	*149*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*
M2-8:2FTS	*115*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:18*	*1*

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: AMBIENT BLANK-082318
Date Collected: 08/23/18 11:15
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-3
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**9.2**		1.6	0.29	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.40	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.47	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.20	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorooctanoic acid (PFOA)	ND		1.6	0.69	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.22	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.25	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.90	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.6	1.1	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.24	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.16	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorohexanesulfonic acid (PFHxS)	**0.24**	**J B**	1.6	0.14	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.16	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.44	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.26	ng/L		09/06/18 03:43	09/06/18 22:26	1
Perfluorooctane Sulfonamide (FOSA)	ND		1.6	0.29	ng/L		09/06/18 03:43	09/06/18 22:26	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		16	2.5	ng/L		09/06/18 03:43	09/06/18 22:26	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		16	1.6	ng/L		09/06/18 03:43	09/06/18 22:26	1
6:2 FTS	ND		16	1.6	ng/L		09/06/18 03:43	09/06/18 22:26	1
8:2 FTS	ND		16	1.6	ng/L		09/06/18 03:43	09/06/18 22:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*97*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C5 PFPeA	*102*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C2 PFHxA	*105*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C4-PFHpA	*102*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C4 PFOA	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C5 PFNA	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C2 PFDA	*106*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C2 PFUnA	*105*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C2 PFDoA	*91*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C2-PFTeDA	*105*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C3-PFBS	*94*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
18O2 PFHxS	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C4 PFOS	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
13C8 FOSA	*99*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
d3-NMeFOSAA	*104*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
d5-NEtFOSAA	*106*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
M2-6:2FTS	*118*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*
M2-8:2FTS	*104*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:26*	*1*

Client Sample ID: DUPLICATE-082318

Date Collected: 08/23/18 12:00
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**34**		1.7	0.29	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluoropentanoic acid (PFPeA)	**1.3**	**J**	1.7	0.40	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorohexanoic acid (PFHxA)	**1.2**	**J**	1.7	0.48	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluoroheptanoic acid (PFHpA)	**0.45**	**J**	1.7	0.21	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorooctanoic acid (PFOA)	**1.6**	**J**	1.7	0.70	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.22	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.26	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.91	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.45	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorohexanesulfonic acid (PFHxS)	**0.41**	**J B**	1.7	0.14	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorooctanesulfonic acid (PFOS)	**0.49**	**J**	1.7	0.45	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		09/06/18 03:43	09/06/18 22:33	1
Perfluorooctane Sulfonamide (FOSA)	ND		1.7	0.29	ng/L		09/06/18 03:43	09/06/18 22:33	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		09/06/18 03:43	09/06/18 22:33	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		09/06/18 03:43	09/06/18 22:33	1
6:2 FTS	ND		17	1.7	ng/L		09/06/18 03:43	09/06/18 22:33	1
8:2 FTS	ND		17	1.7	ng/L		09/06/18 03:43	09/06/18 22:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*48*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C5 PFPeA	*73*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C2 PFHxA	*85*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C4-PFHpA	*94*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C4 PFOA	*102*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C5 PFNA	*97*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C2 PFDA	*101*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C2 PFUnA	*96*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C2 PFDoA	*92*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C2-PFTeDA	*97*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C3-PFBS	*86*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
18O2 PFHxS	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C4 PFOS	*98*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
13C8 FOSA	*91*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
d3-NMeFOSAA	*97*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
d5-NEtFOSAA	*106*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
M2-6:2FTS	*143*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*
M2-8:2FTS	*106*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:33*	*1*

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: EQUIP BLANK082318
Date Collected: 08/23/18 15:55
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-5
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**6.9**		2.0	0.34	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.48	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.57	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.24	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.83	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.26	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.30	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.54	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.28	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorohexanesulfonic acid (PFHxS)	**0.27**	**J B**	2.0	0.17	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.53	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.31	ng/L		09/06/18 03:43	09/06/18 22:41	1
Perfluorooctane Sulfonamide (FOSA)	ND		2.0	0.34	ng/L		09/06/18 03:43	09/06/18 22:41	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.0	ng/L		09/06/18 03:43	09/06/18 22:41	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		09/06/18 03:43	09/06/18 22:41	1
6:2 FTS	ND		20	2.0	ng/L		09/06/18 03:43	09/06/18 22:41	1
8:2 FTS	ND		20	2.0	ng/L		09/06/18 03:43	09/06/18 22:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*76*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C5 PFPeA	*104*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C2 PFHxA	*105*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C4-PFHpA	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C4 PFOA	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C5 PFNA	*102*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C2 PFDA	*106*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C2 PFUnA	*113*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C2 PFDoA	*95*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C2-PFTeDA	*108*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C3-PFBS	*99*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
18O2 PFHxS	*111*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C4 PFOS	*99*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
13C8 FOSA	*103*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
d3-NMeFOSAA	*102*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
d5-NEtFOSAA	*108*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
M2-6:2FTS	*116*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*
M2-8:2FTS	*119*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:41*	*1*

Client Sample ID: MW-16S

Date Collected: 08/24/18 08:25
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-6

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**84**		1.9	0.33	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluoropentanoic acid (PFPeA)	ND		1.9	0.47	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorohexanoic acid (PFHxA)	ND		1.9	0.55	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.24	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorooctanoic acid (PFOA)	**1.3**	**J**	1.9	0.81	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorononanoic acid (PFNA)	**0.36**	**J**	1.9	0.26	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.30	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	1.0	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.52	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.9	1.2	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.28	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.19	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorohexanesulfonic acid (PFHxS)	**0.33**	**J B**	1.9	0.16	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.18	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorooctanesulfonic acid (PFOS)	**0.54**	**J**	1.9	0.51	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.30	ng/L		09/06/18 03:43	09/06/18 22:48	1
Perfluorooctane Sulfonamide (FOSA)	ND		1.9	0.33	ng/L		09/06/18 03:43	09/06/18 22:48	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		19	3.0	ng/L		09/06/18 03:43	09/06/18 22:48	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		19	1.8	ng/L		09/06/18 03:43	09/06/18 22:48	1
6:2 FTS	ND		19	1.9	ng/L		09/06/18 03:43	09/06/18 22:48	1
8:2 FTS	ND		19	1.9	ng/L		09/06/18 03:43	09/06/18 22:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*25*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C5 PFPeA	*34*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C2 PFHxA	*36*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C4-PFHpA	*39*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C4 PFOA	*42*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C5 PFNA	*40*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C2 PFDA	*40*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C2 PFUnA	*36*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C2 PFDoA	*34*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C2-PFTeDA	*31*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C3-PFBS	*37*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
18O2 PFHxS	*40*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C4 PFOS	*36*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
13C8 FOSA	*34*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
d3-NMeFOSAA	*39*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
d5-NEtFOSAA	*41*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
M2-6:2FTS	*96*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*
M2-8:2FTS	*73*		*25 - 150*	*09/06/18 03:43*	*09/06/18 22:48*	*1*

Isotope Dilution Summary

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	DXE (15-110)							
480-140856-1	MW-2	22							
480-140856-1 MS	MW-2	25							
480-140856-1 MSD	MW-2	25							
480-140856-2	MW-3	21							
480-140856-3	DUPLICATE-082318	22							
480-140856-4	EQUIP BLANK-082318	25							
480-140856-5	MW-16S	22							
LCS 480-431542/2-A	Lab Control Sample	31							
MB 480-431542/1-A	Method Blank	30							

Surrogate Legend

DXE = 1,4-Dioxane-d8

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	PFHpA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
480-140857-1	MW-2	31	56	76	86	96	93	104	100
480-140857-1 MS	MW-2	30	55	74	86	99	95	102	106
480-140857-1 MSD	MW-2	31	59	83	92	98	102	106	114
480-140857-2	MW-3	49	76	93	97	105	103	107	106
480-140857-3	AMBIENT BLANK-082318	97	102	105	102	103	103	106	105
480-140857-4	DUPLICATE-082318	48	73	85	94	102	97	101	96
480-140857-5	EQUIP BLANK082318	76	104	105	103	103	102	106	113
480-140857-6	MW-16S	25	34	36	39	42	40	40	36
LCS 320-244082/2-A	Lab Control Sample	97	100	102	100	103	103	104	102
MB 320-244082/1-A	Method Blank	93	97	98	104	100	101	99	103

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	3C3-PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	-NMeFOSA (25-150)	-NEtFOSA (25-150)
480-140857-1	MW-2	91	96	82	92	93	95	110	117
480-140857-1 MS	MW-2	96	107	75	97	98	100	112	116
480-140857-1 MSD	MW-2	104	116	84	105	106	101	124	126
480-140857-2	MW-3	93	111	95	103	102	97	109	114
480-140857-3	AMBIENT BLANK-082318	91	105	94	103	103	99	104	106
480-140857-4	DUPLICATE-082318	92	97	86	103	98	91	97	106
480-140857-5	EQUIP BLANK082318	95	108	99	111	99	103	102	108
480-140857-6	MW-16S	34	31	37	40	36	34	39	41
LCS 320-244082/2-A	Lab Control Sample	104	107	94	105	100	92	101	108
MB 320-244082/1-A	Method Blank	93	96	97	99	99	93	101	106

		Percent Isotope Dilution Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)
480-140857-1	MW-2	194 *	147
480-140857-1 MS	MW-2	197 *	119
480-140857-1 MSD	MW-2	206 *	152 *
480-140857-2	MW-3	149	115

Isotope Dilution Summary

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)								
480-140857-3	AMBIENT BLANK-082318	118	104								
480-140857-4	DUPLICATE-082318	143	106								
480-140857-5	EQUIP BLANK082318	116	119								
480-140857-6	MW-16S	96	73								
LCS 320-244082/2-A	Lab Control Sample	104	95								
MB 320-244082/1-A	Method Blank	102	84								

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
PFHpA = 13C4-PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2-PFTeDA
13C3-PFBS = 13C3-PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3-NMeFOSAA = d3-NMeFOSAA
d5-NEtFOSAA = d5-NEtFOSAA
M262FTS = M2-6:2FTS
M282FTS = M2-8:2FTS

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: MB 480-431542/1-A
Matrix: Water
Analysis Batch: 432497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431542

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		08/27/18 08:03	08/31/18 17:26	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*30*		*15 - 110*	*08/27/18 08:03*	*08/31/18 17:26*	*1*

Lab Sample ID: LCS 480-431542/2-A
Matrix: Water
Analysis Batch: 432497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431542

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			1.00	1.04		ug/L		104	40 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8	*31*		*15 - 110*

Lab Sample ID: 480-140856-1 MS
Matrix: Water
Analysis Batch: 432705

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 431542

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	190	E	1.05	165	E 4	ug/L		-2584	40 - 140		

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Dioxane-d8	*25*		*15 - 110*

Lab Sample ID: 480-140856-1 MSD
Matrix: Water
Analysis Batch: 432705

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 431542

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	190	E	1.04	148	E 4	ug/L		-4242	40 - 140	11	20

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Dioxane-d8	*25*		*15 - 110*

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-244082/1-A
Matrix: Water
Analysis Batch: 244264

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0	0.35	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		08/27/18 12:52	09/06/18 21:41	1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-244082/1-A
Matrix: Water
Analysis Batch: 244264

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 244082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorohexanesulfonic acid (PFHxS)	0.294	J	2.0	0.17	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		08/27/18 12:52	09/06/18 21:41	1
Perfluorooctane Sulfonamide (FOSA)	ND		2.0	0.35	ng/L		08/27/18 12:52	09/06/18 21:41	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		08/27/18 12:52	09/06/18 21:41	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		08/27/18 12:52	09/06/18 21:41	1
6:2 FTS	ND		20	2.0	ng/L		08/27/18 12:52	09/06/18 21:41	1
8:2 FTS	ND		20	2.0	ng/L		08/27/18 12:52	09/06/18 21:41	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*93*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C5 PFPeA	*97*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C2 PFHxA	*98*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C4-PFHpA	*104*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C4 PFOA	*100*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C5 PFNA	*101*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C2 PFDA	*99*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C2 PFUnA	*103*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C2 PFDoA	*93*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C2-PFTeDA	*96*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C3-PFBS	*97*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
18O2 PFHxS	*99*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C4 PFOS	*99*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
13C8 FOSA	*93*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
d3-NMeFOSAA	*101*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
d5-NEtFOSAA	*106*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
M2-6:2FTS	*102*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*
M2-8:2FTS	*84*		*25 - 150*	*08/27/18 12:52*	*09/06/18 21:41*	*1*

Lab Sample ID: LCS 320-244082/2-A
Matrix: Water
Analysis Batch: 244264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	39.5		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	40.0	40.2		ng/L		100	66 - 126
Perfluorohexanoic acid (PFHxA)	40.0	37.0		ng/L		92	66 - 126
Perfluoroheptanoic acid (PFHpA)	40.0	41.5		ng/L		104	66 - 126
Perfluorooctanoic acid (PFOA)	40.0	39.8		ng/L		99	64 - 124
Perfluorononanoic acid (PFNA)	40.0	39.8		ng/L		100	68 - 128

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-244082/2-A
Matrix: Water
Analysis Batch: 244264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 244082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorodecanoic acid (PFDA)	40.0	38.2		ng/L		96	69 - 129
Perfluoroundecanoic acid (PFUnA)	40.0	39.2		ng/L		98	60 - 120
Perfluorododecanoic acid (PFDoA)	40.0	37.4		ng/L		93	71 - 131
Perfluorotridecanoic Acid (PFTriA)	40.0	40.3		ng/L		101	72 - 132
Perfluorotetradecanoic acid (PFTeA)	40.0	36.8		ng/L		92	68 - 128
Perfluorobutanesulfonic acid (PFBS)	35.4	36.3		ng/L		103	73 - 133
Perfluorohexanesulfonic acid (PFHxS)	36.4	32.7		ng/L		90	63 - 123
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	42.1		ng/L		111	68 - 128
Perfluorooctanesulfonic acid (PFOS)	37.1	34.8		ng/L		94	67 - 127
Perfluorodecanesulfonic acid (PFDS)	38.6	40.7		ng/L		106	68 - 128
Perfluorooctane Sulfonamide (FOSA)	40.0	42.6		ng/L		107	70 - 130
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	39.3		ng/L		98	67 - 127
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	36.9		ng/L		92	65 - 125
6:2 FTS	37.9	34.4		ng/L		91	66 - 126
8:2 FTS	38.3	37.3		ng/L		97	67 - 127

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*97*		*25 - 150*
13C5 PFPeA	*100*		*25 - 150*
13C2 PFHxA	*102*		*25 - 150*
13C4-PFHpA	*100*		*25 - 150*
13C4 PFOA	*103*		*25 - 150*
13C5 PFNA	*103*		*25 - 150*
13C2 PFDA	*104*		*25 - 150*
13C2 PFUnA	*102*		*25 - 150*
13C2 PFDoA	*104*		*25 - 150*
13C2-PFTeDA	*107*		*25 - 150*
13C3-PFBS	*94*		*25 - 150*
18O2 PFHxS	*105*		*25 - 150*
13C4 PFOS	*100*		*25 - 150*
13C8 FOSA	*92*		*25 - 150*
d3-NMeFOSAA	*101*		*25 - 150*
d5-NEtFOSAA	*108*		*25 - 150*
M2-6:2FTS	*104*		*25 - 150*
M2-8:2FTS	*95*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 480-140857-1 MS
Matrix: Water
Analysis Batch: 244264

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 244082

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	84		32.8	125		ng/L		126	70 - 130
Perfluoropentanoic acid (PFPeA)	1.7		32.8	30.5		ng/L		88	66 - 126
Perfluorohexanoic acid (PFHxA)	1.7		32.8	33.9		ng/L		98	66 - 126
Perfluoroheptanoic acid (PFHpA)	0.81	J	32.8	33.1		ng/L		99	66 - 126
Perfluorooctanoic acid (PFOA)	2.1		32.8	32.6		ng/L		93	64 - 124
Perfluorononanoic acid (PFNA)	0.26	J	32.8	35.3		ng/L		107	68 - 128
Perfluorodecanoic acid (PFDA)	ND		32.8	33.1		ng/L		101	69 - 129
Perfluoroundecanoic acid (PFUnA)	ND		32.8	31.0		ng/L		94	60 - 120
Perfluorododecanoic acid (PFDoA)	ND		32.8	34.5		ng/L		105	71 - 131
Perfluorotridecanoic Acid (PFTriA)	ND		32.8	35.4		ng/L		108	72 - 132
Perfluorotetradecanoic acid (PFTeA)	ND		32.8	29.3		ng/L		89	68 - 128
Perfluorobutanesulfonic acid (PFBS)	0.68	J	29.0	28.3		ng/L		95	73 - 133
Perfluorohexanesulfonic acid (PFHxS)	0.21	J B	29.9	27.6		ng/L		92	63 - 123
Perfluoroheptanesulfonic Acid (PFHpS)	ND		31.2	32.6		ng/L		104	68 - 128
Perfluorooctanesulfonic acid (PFOS)	1.5	J	30.4	29.6		ng/L		92	67 - 127
Perfluorodecanesulfonic acid (PFDS)	ND		31.6	32.8		ng/L		104	68 - 128
Perfluorooctane Sulfonamide (FOSA)	ND		32.8	31.9		ng/L		97	70 - 130
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		32.8	32.7		ng/L		100	67 - 127
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		32.8	30.5		ng/L		93	65 - 125
6:2 FTS	ND		31.1	30.6		ng/L		98	66 - 126
8:2 FTS	ND		31.4	34.3		ng/L		109	67 - 127

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*30*		*25 - 150*
13C5 PFPeA	*55*		*25 - 150*
13C2 PFHxA	*74*		*25 - 150*
13C4-PFHpA	*86*		*25 - 150*
13C4 PFOA	*99*		*25 - 150*
13C5 PFNA	*95*		*25 - 150*
13C2 PFDA	*102*		*25 - 150*
13C2 PFUnA	*106*		*25 - 150*
13C2 PFDoA	*96*		*25 - 150*
13C2-PFTeDA	*107*		*25 - 150*
13C3-PFBS	*75*		*25 - 150*
18O2 PFHxS	*97*		*25 - 150*
13C4 PFOS	*98*		*25 - 150*
13C8 FOSA	*100*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 480-140857-1 MS
Matrix: Water
Analysis Batch: 244264

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 244082

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
d3-NMeFOSAA	*112*		*25 - 150*
d5-NEtFOSAA	*116*		*25 - 150*
M2-6:2FTS	*197*	*	*25 - 150*
M2-8:2FTS	*119*		*25 - 150*

Lab Sample ID: 480-140857-1 MSD
Matrix: Water
Analysis Batch: 244264

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 244082

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	84		33.4	126		ng/L		127	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	1.7		33.4	31.4		ng/L		89	66 - 126	3	30
Perfluorohexanoic acid (PFHxA)	1.7		33.4	33.2		ng/L		94	66 - 126	2	30
Perfluoroheptanoic acid (PFHpA)	0.81	J	33.4	36.0		ng/L		105	66 - 126	8	30
Perfluorooctanoic acid (PFOA)	2.1		33.4	34.2		ng/L		96	64 - 124	5	30
Perfluorononanoic acid (PFNA)	0.26	J	33.4	34.9		ng/L		104	68 - 128	1	30
Perfluorodecanoic acid (PFDA)	ND		33.4	32.8		ng/L		98	69 - 129	1	30
Perfluoroundecanoic acid (PFUnA)	ND		33.4	30.9		ng/L		93	60 - 120	0	30
Perfluorododecanoic acid (PFDoA)	ND		33.4	35.8		ng/L		107	71 - 131	4	30
Perfluorotridecanoic Acid (PFTriA)	ND		33.4	37.1		ng/L		111	72 - 132	5	30
Perfluorotetradecanoic acid (PFTeA)	ND		33.4	29.5		ng/L		89	68 - 128	1	30
Perfluorobutanesulfonic acid (PFBS)	0.68	J	29.5	29.1		ng/L		96	73 - 133	3	30
Perfluorohexanesulfonic acid (PFHxS)	0.21	J B	30.4	28.2		ng/L		92	63 - 123	2	30
Perfluoroheptanesulfonic Acid (PFHpS)	ND		31.8	32.5		ng/L		102	68 - 128	0	30
Perfluorooctanesulfonic acid (PFOS)	1.5	J	31.0	29.6		ng/L		91	67 - 127	0	30
Perfluorodecanesulfonic acid (PFDS)	ND		32.2	32.9		ng/L		102	68 - 128	0	30
Perfluorooctane Sulfonamide (FOSA)	ND		33.4	34.0		ng/L		102	70 - 130	6	30
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		33.4	31.2		ng/L		94	67 - 127	4	30
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		33.4	33.7		ng/L		101	65 - 125	10	30
6:2 FTS	ND		31.6	30.5		ng/L		97	66 - 126	0	30
8:2 FTS	ND		32.0	28.3		ng/L		89	67 - 127	19	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C4 PFBA	*31*		*25 - 150*
13C5 PFPeA	*59*		*25 - 150*
13C2 PFHxA	*83*		*25 - 150*
13C4-PFHpA	*92*		*25 - 150*
13C4 PFOA	*98*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 480-140857-1 MSD
Matrix: Water
Analysis Batch: 244264

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 244082

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C5 PFNA	102		25 - 150
13C2 PFDA	106		25 - 150
13C2 PFUnA	114		25 - 150
13C2 PFDoA	104		25 - 150
13C2-PFTeDA	116		25 - 150
13C3-PFBS	84		25 - 150
18O2 PFHxS	105		25 - 150
13C4 PFOS	106		25 - 150
13C8 FOSA	101		25 - 150
d3-NMeFOSAA	124		25 - 150
d5-NEtFOSAA	126		25 - 150
M2-6:2FTS	206	*	25 - 150
M2-8:2FTS	152	*	25 - 150

GC/MS Semi VOA

Prep Batch: 431542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140856-1	MW-2	Total/NA	Water	3510C	
480-140856-2	MW-3	Total/NA	Water	3510C	
480-140856-3	DUPLICATE-082318	Total/NA	Water	3510C	
480-140856-4	EQUIP BLANK-082318	Total/NA	Water	3510C	
480-140856-5	MW-16S	Total/NA	Water	3510C	
MB 480-431542/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-431542/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-140856-1 MS	MW-2	Total/NA	Water	3510C	
480-140856-1 MSD	MW-2	Total/NA	Water	3510C	

Analysis Batch: 432497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-431542/1-A	Method Blank	Total/NA	Water	8270D SIM ID	431542
LCS 480-431542/2-A	Lab Control Sample	Total/NA	Water	8270D SIM ID	431542

Analysis Batch: 432705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140856-1	MW-2	Total/NA	Water	8270D SIM ID	431542
480-140856-2	MW-3	Total/NA	Water	8270D SIM ID	431542
480-140856-3	DUPLICATE-082318	Total/NA	Water	8270D SIM ID	431542
480-140856-5	MW-16S	Total/NA	Water	8270D SIM ID	431542
480-140856-1 MS	MW-2	Total/NA	Water	8270D SIM ID	431542
480-140856-1 MSD	MW-2	Total/NA	Water	8270D SIM ID	431542

Analysis Batch: 433401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140856-4	EQUIP BLANK-082318	Total/NA	Water	8270D SIM ID	431542

LCMS

Prep Batch: 244082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140857-1	MW-2	Total/NA	Water	3535	
480-140857-2	MW-3	Total/NA	Water	3535	
480-140857-3	AMBIENT BLANK-082318	Total/NA	Water	3535	
480-140857-4	DUPLICATE-082318	Total/NA	Water	3535	
480-140857-5	EQUIP BLANK082318	Total/NA	Water	3535	
480-140857-6	MW-16S	Total/NA	Water	3535	
MB 320-244082/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-244082/2-A	Lab Control Sample	Total/NA	Water	3535	
480-140857-1 MS	MW-2	Total/NA	Water	3535	
480-140857-1 MSD	MW-2	Total/NA	Water	3535	

Analysis Batch: 244264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140857-1	MW-2	Total/NA	Water	537 (modified)	244082
480-140857-2	MW-3	Total/NA	Water	537 (modified)	244082
480-140857-3	AMBIENT BLANK-082318	Total/NA	Water	537 (modified)	244082
480-140857-4	DUPLICATE-082318	Total/NA	Water	537 (modified)	244082
480-140857-5	EQUIP BLANK082318	Total/NA	Water	537 (modified)	244082

LCMS (Continued)

Analysis Batch: 244264 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-140857-6	MW-16S	Total/NA	Water	537 (modified)	244082
MB 320-244082/1-A	Method Blank	Total/NA	Water	537 (modified)	244082
LCS 320-244082/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	244082
480-140857-1 MS	MW-2	Total/NA	Water	537 (modified)	244082
480-140857-1 MSD	MW-2	Total/NA	Water	537 (modified)	244082

Lab Chronicle

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: MW-2
Date Collected: 08/23/18 11:00
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			431542	08/27/18 08:03	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		100	432705	09/04/18 17:54	DMR	TAL BUF

Client Sample ID: MW-3
Date Collected: 08/23/18 13:45
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			431542	08/27/18 08:03	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		200	432705	09/04/18 18:17	DMR	TAL BUF

Client Sample ID: DUPLICATE-082318
Date Collected: 08/23/18 12:00
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			431542	08/27/18 08:03	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		200	432705	09/04/18 18:40	DMR	TAL BUF

Client Sample ID: EQUIP BLANK-082318
Date Collected: 08/23/18 15:55
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			431542	08/27/18 08:03	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	433401	09/10/18 12:47	DMR	TAL BUF

Client Sample ID: MW-16S
Date Collected: 08/24/18 08:25
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140856-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			431542	08/27/18 08:03	JMP	TAL BUF
Total/NA	Analysis	8270D SIM ID		20	432705	09/04/18 19:04	DMR	TAL BUF

Client Sample ID: MW-2
Date Collected: 08/23/18 11:00
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			244082	09/06/18 03:43	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1	244264	09/06/18 21:56	S1M	TAL SAC

Lab Chronicle

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Client Sample ID: MW-3
Date Collected: 08/23/18 13:45
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			244082	09/06/18 03:43	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1	244264	09/06/18 22:18	S1M	TAL SAC

Client Sample ID: AMBIENT BLANK-082318
Date Collected: 08/23/18 11:15
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			244082	09/06/18 03:43	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1	244264	09/06/18 22:26	S1M	TAL SAC

Client Sample ID: DUPLICATE-082318
Date Collected: 08/23/18 12:00
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			244082	09/06/18 03:43	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1	244264	09/06/18 22:33	S1M	TAL SAC

Client Sample ID: EQUIP BLANK082318
Date Collected: 08/23/18 15:55
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			244082	09/06/18 03:43	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1	244264	09/06/18 22:41	S1M	TAL SAC

Client Sample ID: MW-16S
Date Collected: 08/24/18 08:25
Date Received: 08/24/18 13:15

Lab Sample ID: 480-140857-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			244082	09/06/18 03:43	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1	244264	09/06/18 22:48	S1M	TAL SAC

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Method Summary

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Method	Method Description	Protocol	Laboratory
8270D SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	TAL BUF
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Project/Site: Scott Figgie West of Plant 2

TestAmerica Job ID: 480-140856-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-140856-1	MW-2	Water	08/23/18 11:00	08/24/18 13:15
480-140856-2	MW-3	Water	08/23/18 13:45	08/24/18 13:15
480-140856-3	DUPLICATE-082318	Water	08/23/18 12:00	08/24/18 13:15
480-140856-4	EQUIP BLANK-082318	Water	08/23/18 15:55	08/24/18 13:15
480-140856-5	MW-16S	Water	08/24/18 08:25	08/24/18 13:15
480-140857-1	MW-2	Water	08/23/18 11:00	08/24/18 13:15
480-140857-2	MW-3	Water	08/23/18 13:45	08/24/18 13:15
480-140857-3	AMBIENT BLANK-082318	Water	08/23/18 11:15	08/24/18 13:15
480-140857-4	DUPLICATE-082318	Water	08/23/18 12:00	08/24/18 13:15
480-140857-5	EQUIP BLANK082318	Water	08/23/18 15:55	08/24/18 13:15
480-140857-6	MW-16S	Water	08/24/18 08:25	08/24/18 13:15

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAm... THE LEADER IN EN...

480-140856 COC

Client Information	Sampler: Emily Au	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-116902-2700(
Client Contact: Emily Au	Phone: 716-531-3312	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #:

Address: 257 West Genesee Street Suite 400	Due Date Requested:	Analysis Requested
City: Buffalo	TAT Requested (days): STANDARD	
State, Zip: NY, 14202-2657	PO #: Purchase Order not required	
Phone:	WO #:	
Email: emily.au@aecom.com	Project #: 48018677	
Project Name: Former Scott Aviation Facility	SSOW#:	
Site:		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM_MS_ID - 1,4-Dioxane	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
MW-2	8/23/18	1100	G	Water	N	Y	2		Bottles say MW-25 use MW-2 from COC
MW-2-MS	8/23/18	1100	G	Water	N		2		
MW-2-MSD	8/23/18	1100	G	Water	N		2		
MW-3	8/23/18	1345	G	Water	N		2		
~~DUP~~ Duplicate-082318	8/23/18	1200	G	Water	N		2		
Equip Blank-082318	8/23/18	1555	G	Water	N		2		
MW-16S	8/24/18	0825	G	Water	N		2		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Emily Au	8/24/18 1315	AECOM		8/24/18 1315	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 2.0

Ver: 08/04/2016

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Emily Au	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-116910-27001.1
Client Contact: Emily Au	Phone: 716-531-3312	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #:

Address: 257 West Genesee Street Suite 400	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Buffalo	TAT Requested (days): STD.		A - HCL ... ane B ... C ... lO2 D ... l4S E ... O3 F ... 2O3 G ... 4 H ... odecahydrate I - I... e J - D... ... - pH 4-5 K - E... 480-140857 COC L - EDA Z - other (specify) Other:
State, Zip: NY, 14202-2657			
Phone:	PO #: Purchase Order not required		
Email: emily.au@aecom.com	WO #:		
Project Name: Former Scott Aviation Facility	Project #: 48018677		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, Standard List (21 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
MW-2	8/23/18	1100	G	Water			2		Bottles say MW-25 use MW-2 from chain.
MW-2-MS	8/23/18	1100	G	Water			2		
MW-2 MSD	8/23/18	1100	G	Water			2		
MW-3	8/23/18	1345	G	Water			2		
Ambient Blank-082318	8/23/18	1115	G	Water			2		
Duplicate-082318	8/23/18	1200	G	Water			2		
Equip Blank-082318	8/23/18	1555	G	Water			2		
MW-165	8/24/18	0825	G	Water			2		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Emily Au	8/24/18 1315	AECOM		8/24/18 1715	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 2.2

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-140856-1

Login Number: 140856
List Number: 1
Creator: Wallace, Cameron

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-140856-1

Login Number: 140857
List Number: 1
Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	AECOM
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-140856-1

Login Number: 140857
List Number: 2
Creator: Gooch, Mayce

List Source: TestAmerica Sacramento
List Creation: 08/28/18 11:42 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	21.0c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	