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December 10, 2020

Mr. Steve Martin
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, Wisconsin 53711

Re: Site Investigation Report
ATC Transformer Fire
722 East Main Street
Madison, Wisconsin
FID#: 113435520
BRRTS #: 02-13-584085

Dear Mr. Martin:

On behalf of American Transmission Company, LLC (ATC), AECOM is submitting the attached *Site Investigation Report* for the site located at 722 East Main Street in Madison, Wisconsin. This report describes the results of the site investigation as followed in the Work Plan, submitted on October 15, 2019.

If you have any questions or comments about the planned site investigation activities, please contact me at (608) 828-8208.

Sincerely,

Leo B Linnemanstons

Leo B Linnemanstons, P.G.
Senior Project Hydrogeologist
AECOM

Enclosures: As stated.

cc: Erika Biemann, American Transmission Company, LLC

AECOM Imagine it. Delivered.

Submitted to:
WDNR

Submitted by:
AECOM
Madison, WI
60611431
December 2020

Site Investigation Report

ATC Transformer Fire, Blount Substation
City of Madison, Dane County, Wisconsin

BRRTS#: 02-13-584085
FID #: 113435520

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Site Investigation Report
ATC Transformer Fire, Blount Substation
City of Madison, Dane County, Wisconsin

BRRTS #: 02-13-584085
FID #: 113435520

Prepared By: Joel MacKinney

In conformance with NR 712.09 submittal certification requirements:
"I, Leo B. Linnemanstons, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Approved By: Leo Linnemanstons, P.G.
Senior Project Hydrogeologist

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I. EXECUTIVE SUMMARY

On the morning of July 19, 2019, American Transmission Company, LLC (ATC) had a 138 kV transformer explode at the Madison Gas & Electric (MGE) Blount Substation in downtown Madison. The resulting explosion ruptured the transformer releasing a portion of the approximately 17,000 gallons of mineral oil that it contained and causing a large fire. The Madison Fire Department (MFD) and Truax Fire Department used an aqueous film forming foam (AFFF) fire suppressant agent for firefighting. Based on information from the manufacturer, the AFFF product contained at least one of the Per- and Polyfluoroalkyl Substances (PFAS). An estimated 140,000 gallons of water mixed with approximately 55 gallons of AFFF were discharged inside the substation by the MFD to suppress the fire.

On October 10, 2019, the WDNR issued a responsible party letter to ATC under BRRTS Activity # 02-13-584085. On October 15, 2019, AECOM submitted the *Site Investigation Work Plan* for the site located at 722 East Main Street in Madison on behalf of ATC. Site investigation activities including soil, groundwater, surface water, and AFFF sampling were completed from October 2019 to October 2020. Ninety-two target soil samples and 41 target water samples were collected and analyzed for PFAS during the investigation.

As part of cleanup activities after the fire, approximately 140,000 gallons of PFAS impacted water was collected, treated, and discharged under a Wisconsin Pollution Elimination Discharge System (WPDES) permit. ATC also performed a series of soil removal actions inside the substation that have removed soils containing PFAS greater than 10 ug/kg. An estimated total of 1,000 tons of PFAS impacted soils were removed and disposed at US Ecology's Wayne Disposal Facility in Belleville, Michigan.

Based on site investigation results, the primary PFAS constituent of the AFFF product is 6:2 FTS. Following removal actions, only low levels of residual 6:2 FTS and other PFAS analytes remain in soils at the substation. Overall, the average total PFAS concentration of residual surface soils inside the substation is lower than the apparent background PFAS concentrations outside the substation walls. Using 6:2 FTS as the indicator compound in water, PFAS does not appear to be migrating from the substation and observed PFAS concentrations outside the substation are not likely related to the AFFF release. Furthermore, PFAS concentrations in water samples at the site no longer exceed the recently proposed Chapter NR 140 Enforcement Standards for PFAS.

Therefore, the site investigation has successfully characterized the residual PFAS-impacts related to the release of AFFF product in response to the transformer fire on July 19, 2019. The primary component of the AFFF is 6:2 FTS, which was used to guide remedial efforts and also to distinguish AFFF impacts from background PFAS-impacts that were characterized by a higher occurrence of PFOA and PFOS not found at the substation. Extensive source removal at the site has removed to the extent practical PFAS-impacted soil and water related to the AFFF release. Based on these findings, the residual PFAS impacts are not believed to pose an unacceptable risk to receptors via direct contact, vapor, or groundwater.

Based on results of the site investigation, AECOM recommends proceeding to site closure with no further action.

II. GENERAL INFORMATION

- Project Title: ATC Transformer Fire – Site Investigation
  MG&E Blount Substation
  722 East Main Street
  Madison, Wisconsin

- Responsible Party (RP): American Transmission Company, LLC
  W234 N2000 Ridgeview Parkway Court
  Pewaukee, Wisconsin

- RP Contact: MS. Erika Biemann
  American Transmission Company, LLC
  W234 N2000 Ridgeview Parkway Court
  Pewaukee, Wisconsin
  ebiemann@atcllc.com
  (262) 506-7602

- Current Property Owner: Madison Gas & Electric Company
  133 South Blair Street
  Madison, Wisconsin 53703
  (608) 252-7000

* Consultant: AECOM Technical Services, Inc.
1350 Deming Way, Suite 100
Middleton, Wisconsin 53562
Mr. Leo B. Linnemanstons
(608) 828-8208
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* Site Name: ATC Transformer Fire -
MG&E Blount Substation
BRRTS#: 02-13-584085
WDNR FID: 113435520
SIC Code: 4953
NAICS Code: 56221

* Location: NE ¼, of the SW ¼ of Section 13, T7N, R9E
X, Y Coordinates (WTM91): 570852, 289861
722 East Main Street
City of Madison
Dane County, Wisconsin

III. BACKGROUND INFORMATION

A. Site Description

The subject property is 115,424 square feet (2.64 acres) in size. The property contains an electrical substation, two brick control buildings, and two metal buildings. The two brick control buildings have basements with active foundation sumps, and the two metal buildings consist of a control building and a pump house containing an 8,000-gallon mineral oil tank. The property is zoned by the city as a traditional employment (TE) district as well as historic district (HIST-L, HIST-TL) and the property type is commercial.

B. Site History

The former Madison Gas Light & Coke Company was initially constructed in 1855 and operated until the 1950s. The site location map is shown on Figure 1 and the site map is shown on Figure 2. Initial operations reportedly used a coal carbonization (coking) process before the plant was converted to a carbureted water gas process (EDI, 1989). The MGP facility was decommissioned in several stages beginning in 1951. Gas holder number 1 (GH-1), which was the largest of several gas holders used on-site, was reportedly demolished in 1967. At that time, as much residual coal tar was removed from the gas holders as possible. However, underground pipes for transmission of gas and coal tar were not removed. The gas holder foundation, beneath existing grade, was reportedly filled with soil. In 1984 MGE installed three new high-voltage cables through GH-1. The existing soil within the planned utility corridor was removed and replaced with clean, granular fill to accommodate cable installation.

C. Previous Investigations

1. MG&E MGP Remediation (2004) – BRRTS# 02-13-001567

From historical information, the Blount Substation is also a closed Environmental Repair Program (ERP) site and is tracked in the WDNR's BRRTS as 02-13-001567 Madison Gas & Electric Manufactured Gas Plant (MGP) site. The soil within GH-1 was investigated on several occasions and was the focus of an in-situ bioventing demonstration project to stimulate aerobic biodegradation of volatile and semi-volatile organic compounds from 1997 through 2003. Results from previous investigation activities and remedial activities are described briefly in the Removal Action Work Plan (RAWP, Barr, 2003) and in detail in the Final Report submitted to MGE by Gas Technology Institute (GTI, 2003). MGE successfully completed two years of full-scale operation of the in-situ treatment (bioventing) system at GH-1, which was consistent with the approved performance-based (NR 720.19) soil cleanup plan submitted to the WNDR for remediation at the site.

2. ATC Transformer Fire Closed Spill (7/2019) – BRRTS# 04-13-585127

On the morning of July 19, 2019, ATC had a 138 kV transformer explode at the Madison Gas & Electric (MGE) Blount Substation in downtown Madison. The resulting explosion ruptured the transformer releasing a portion of the approximately 17,000 gallons of mineral oil that it contained. The explosion is believed to have also ignited the mineral oil causing a large fire.

The Madison Fire Department (MFD) first responders used an aqueous film forming foam (AFFF) fire suppressant agent, Fire Service Plus, Inc., FireAde brand, 3% AFFF Liquid

Foam Concentrate for firefighting. Based on information from the manufacturer, the AFFF product contained at least one of the Per- and Polyfluoroalkyl Substances (PFAS). The MFD is understood to have discharged approximately 120,000 gallons of water mixed with 55 gallons of the AFFF. In addition, the Truax Fire Department also is reported to have applied just over 4 gallons of AFFF (Perimeter Solutions Inc., Phos-Chek brand, 3% AFFF Military Specification (MS) Liquid Foam Concentrate) mixed with about 170 gallons of water.

Summarizing the apparent release of fluids as follows:

- 17,000 gallons of mineral oil (laboratory test confirm non-PCB)
- 140,000 gallons of City of Madison municipal water for fire suppression (only estimated, not metered)
- 55 gallons of AFFF from the MFD for fire suppression
- 4 gallons of AFFF from the Truax FD for fire suppression

The 140,000 gallons of water mixed with AFFF overwhelmed the secondary containment berm surrounding the transformer and displaced the mineral oil across the eastern half of the substation causing extensive staining. The oil-water-AFFF mixture was observed flowing out of the substation at the nearby Main Street entry gate and into the street where the MFD directed flow into a nearby storm catch basin. Because the storm sewers in the area are generally surcharged by nearby surface water bodies, the oil-water-AFFF mixture appears to have only displaced into the storm system and did not flow further.

WDNR directed that environmental oil, water, and soil samples be collected for waste characterization purposes and the analytes must include the following:

- PCBs – The transformer was believed to be manufactured around 1984, and equipment records indicate that a test from 1989 were non-PCB.
- PFAS – Because the MFD and Truax FD used AFFF, WDNR required PFAS to be an analyte.
- DRO – WDNR accepted analyte for assessing mineral oil impacts in soil.

After the first responders completed activities at the site, ATC mobilized its spill response contractor, North Shore Environmental Construction, Inc. (NSEC), of Germantown Wisconsin. NSEC performed immediate cleanup of mineral oil and AFFF residuals that were observed in storm sewers and on the ground surface.

Between July 19 and August 8, spill response activities performed by ATC and their contractors included the following:

Water (stored for treatment prior to discharge):

- Removal of approximately 60,000 gallons of oil-water-AFFF mixture from oil skimming operations in cable vaults inside the substation and storm catch basins along Livingston and Blount Streets;
- Removal of approximately 80,000 gallons of oil-water-AFFF mixture from bulk removal from the storm sewers at Livingston and Blount Street adjacent to the substation.

- Additional removal: Approximately 40,000 gallons of oil-water-AFFF mixture was collected during the next two months from oil skimming and utility vault dewatering during construction to install a replacement transformer in the substation in August and September 2019.

Mineral Oil (beneficial reuse):

- Recovery of approximately 13,000 gallons of mineral oil from removal from the burned transformer and separating from the 140,000 gallons of oil-water-AFFF mixture stored in FRAC tanks from the water removals identified above.

Electrical Equipment (recycled as scrap):

- Removal of the burned transformer and other fire-damaged electrical equipment. Electrical remnants and debris from the fire and explosion that were strewn on the ground around the substation were scraped up and disposed. This also includes cleaning and removal of the entire concrete foundation that the burned transformer had been mounted on.

Soil (disposed as nonhazardous waste at Subtitle C Landfill):

- Removal of an estimated 60 to 80 cubic yards from the approximately 2 to 3 inches of the surface stained soil and gravel from the following areas:
  - Immediate area around the burned transformer (approximate radius of 30 ft);
  - Area east of the burned transformer to the Main Street substation gate and east perimeter substation wall.
  - Area along the east perimeter substation wall (approximately 100 ft);
  - Area along the south perimeter substation wall (approximately 400 ft);

On August 8, 2019 WDNR declared spill response complete. The associated activity (generally regarding release of mineral oil) was closed on January 17, 2020. The open ERP refers to the investigation of PFAS analytes associated with AFFF application at the site in July 2019.

IV. SITE DESCRIPTION

The Blount Substation has previously had a site investigation completed for the MG&E manufactured gas plant (BRRTS# 02-13-001567). The MGP site was closed in June 2005 with residual soil and groundwater contamination in place. During the MGP site investigation, twelve monitoring wells were installed and monitored for periodically from 1986 until 2004. Information developed from that site investigation is included in Appendix A of the Site Investigation Work Plan (October 15, 2019). The following sections summarize that information and is supplemented with recent observations.

A. Topography

The 7.5-minute topographic map of the Madison East, Wisconsin quadrangle (dated 2018) shows the area topography and surface water features in and around the subject property (Figure 1). The topographic map shows the subject property as generally flat at an elevation of approximately 850 feet above mean sea level (AMSL). The topography of the general site vicinity of the subject property is generally flat. The subject property is on an isthmus located between Lake Mendota (normal water level (NWL) 849 MSL) to the north and Lake Monona (NWL 845 MSL) to the south.

B. Site Drainage

Drainage at the substation is generally through infiltration through the graveled surface; however, the site does have a modest crown that directs flow radially to the perimeter walls. Precipitation may also be retained within secondary containment for oil-filled equipment present at the substation. During the response activities to the transformer fire, the following observations were made regarding site drainage:

- Fire suppression water was observed to have covered most of the substation inside the perimeter walls and to have seeped beneath the perimeter walls onto the adjacent sidewalks and terraces along Main and Livingston Streets.
- The substation has one surface water drain structure (StormCeptor) located adjacent to the east perimeter wall that is connected to the City storm sewer beneath Livingston Street.
- MGE control buildings located on the east and west sides of the substation have basements that are drained by sump pumps that are also connected to the City storm sewers under Livingston and Blount Streets.

C. Surficial Soils

The surface soil within the substation walls consists of an approximately one-foot thickness of well-graded crushed gravel. Based on historical information and recent observations during subgrade construction at the substation, the site is completely underlain by historic fill materials including sand, silts and gravel to a depth of 4 to 10 feet below ground surface most of which is contaminated from the MGP site. Because of the long heavy industrial use of the site, the subsurface also contains numerous current and abandoned concrete and steel foundations, utility lines, and other former structures.

D. Site Geology

Pleistocene glacial deposits (Lacustrine Plain) are present below the surficial soils on the subject property. These deposits generally consist of fine-grained silt and clay with sand

present near former shorelines and near stream inlets. These areas are often flat, poorly drained areas with peat accumulations (Michelson, 1983). The underlying bedrock formation is mapped as Cambrian sandstone underlain by the Prairie Du Chien, St. Peter Sandstone and Platteville, Decorah and Galena Formations. Bedrock was not encountered during this investigation but is anticipated to be present at depths ranging between 100 and 150 feet below existing ground surface.

E. Site Hydrogeology

Regional groundwater flow in the area considered to be across the isthmus from Lake Mendota (NWL 849 ft MSL) to the southeast toward Lake Monona (NWL 844 ft MSL). During the site investigation, the depth to groundwater at the site was observed to be between 3.3 and 5.3 ft below ground surface. Groundwater levels appear to respond rapidly to precipitation events that also affect the nearby lake levels. Based on the groundwater observations made during the MGP investigation, the shallow groundwater flow direction locally was not distinctly discernable across the site, which led to a general interpretation that shallow groundwater flow is radially away from the substation but with such a flat gradient that negligible migration was occurring.

Because of relatively easier infiltration through the substation gravel surface compared to the pavement of the surrounding area, shallow groundwater at the substation is likely slightly higher than the surrounding area. The City's storm sewer system is regularly surcharged throughout this area of the isthmus, which through granular backfill and leaky sewer pipes provides direct communication with the area's surface water bodies. Thus, changes in lake levels quickly result in changes in water levels across the isthmus.

During the period of sample collection for this investigation (July 2019 to October 2020), the City's storm sewer system was generally surcharged such that water samples could be collected from catchment basins. Between approximately December 2019 and June 2020, lake levels were lower and catch basins did not have enough water for sampling.

V. PREVIOUS SUBMITTALS

The following lists memoranda and reports previously submitted to the WDNR as part of this investigation:

1. *Preliminary Review of Initial PFAS Laboratory Data*, ATC Blount Transmission Substation, Madison Wisconsin. July 30, 2019.
2. *Preliminary Summary of Environmental Laboratory Data*, ATC Blount Transmission Substation, Madison Wisconsin. September 9, 2019.
3. *Operation & Maintenance Plan and Manual*, American Transmission Company Blount Substation Fire Suppression Water Treatment and Discharge, Madison, Wisconsin. October 3, 2019.
4. *Site Investigation Work Plan*, ATC Blount Transmission Substation, Madison Wisconsin. October 15, 2019.
5. *Start-up Sampling Results - Fire Suppression Water Treatment System*, ATC Blount Transmission Substation, Madison Wisconsin. October 21, 2019.
6. *Confirmation Soil Results for Containment Pit Area*, ATC Blount Transmission Substation, Madison Wisconsin. November 12, 2019.
7. *Operation and Monitoring Summary - Fire Suppression Water Treatment System*, ATC Blount Transmission Substation, Madison Wisconsin. December 9, 2019.
8. *Interim Subsurface PFAS Investigation Results and Soil Removal Action*, ATC Blount Transmission Substation, Madison Wisconsin. February 4, 2020.
9. *Soil Management Plan for Line 6907 Underground Repairs*, ATC Blount Transmission Substation, Madison, Wisconsin. March 16, 2020.
10. *Interim Surface Soil PFAS Results and Groundwater RCL Discussion*, ATC Blount Transmission Substation, Madison Wisconsin. June 10, 2020.

For additional details, including laboratory reports, please refer to previous submittals. The remainder of this SI report summarizes and references previous submittals and presents new information not previously submitted.

VI. METHODS OF INVESTIGATION

A. Site Investigation

The site investigation composed of three tasks to collect necessary soil, surface water, and groundwater samples. Sampling was conducted in accordance with the *Site Investigation Work Plan* submitted on October 15, 2019. To address WDNR's concerns, soil, groundwater, surface water and AFFF product samples were collected at the facility and surrounding areas (see Figures 1 through 4). Table 1 presents an inventory of samples collected during the investigation from July 2019 through October 2020. The table is sorted from oldest to newest sample collection date.

Because PFAS is not known to partition into the vapor phase, no further assessment for vapor intrusion was performed as part of this site investigation.

B. Soil Sample Collection

Soil samples were collected to determine residual PFAS impacts in near surface soil across the substation and surrounding terraces outside the substation as shown on Figure 2. A sampling grid was established across the substation on approximately 50-foot centers and select locations in the surrounding area. Soil samples were collected from the first fill or fine-grained material found beneath the surface. Decontaminated hand sampling equipment was used to remove the surface gravel or grass, and disposable HDPE sampling scoops were used to collect soil samples into laboratory provided containers.

Details and results of the grid sampling were presented in the technical memorandum *Interim Subsurface PFAS Investigation Results and Soil Removal Action* (February 4, 2020).

Based on results of the grid sampling, AECOM recommended additional soil sample collection to address potential data gaps. Details and results of the additional soil sampling is presented in the technical memorandum *Interim Surface Soil PFAS Results and Groundwater RCL Discussion* (June 10, 2020).

Soil sampling from within the substation between October 2019 and April 2020 indicated three areas where residual PFAS concentrations remained slightly higher than surrounding soils (Figure 3). On July 9 and 10, 2020, NSEC conducted remedial excavation of the three areas with residual surface soil concentration of 6:2 FTS greater than 10 ug/kg to a depth of approximately 0.6 feet. NSEC completed the excavations on the southern, eastern, and central portions of the site using a Supersucker vacuum truck as shown on Figure 3. The approximate volume of soil removed was 20 cubic yards. Four confirmation soil samples (SS-79 to SS-82) were collected with at least one soil sample from each excavation floor following completion of the area.

C. Surface Water (Storm Sewer) Sampling

Surface water samples were collected to monitor PFAS concentrations from eight previously sampled monitoring locations:

- StormCeptor: the east catch basin within the substation to evaluate residual impacts after the incident. This catch basin drains to the City of Madison storm sewer system at structure number IN 5247-050.

- River Outlet: the storm sewer outlet (near AS 5543-084) near the intersection of E. Washington Avenue and the Yahara River Bike Path to evaluate potential PFAS impact at the Yahara River. The distance from the transformer to this outlet via storm sewer is approximately 1.02 miles.
- Blount St. Outlet: the S. Blount Street storm sewer outlet (near IN 5349-001) to evaluate potential PFAS impact at Lake Monona. The distance from the transformer to this outlet via storm sewer is approximately 0.33 miles.
- Path Outlet: the storm sewer outlet at the north end of Law Park to evaluate potential PFAS impact at Lake Monona. The distance from the transformer to this outlet via storm sewer is approximately 0.40 miles.
- LVN-6: the catch basin (Structure #IN 5247-115) at the corner of S Livingston Street and E. Washington Ave to evaluate potential PFAS impact between the Storm Ceptor and the Yahara River.
- BNT-3, BNT-4, and BNT-8: three catch basins along S. Blount Street to evaluate potential PFAS impact between the substation and Lake Monona.

Locations of water samples are shown on Figures 1 and 4. During each of the two rounds of sampling, the surface water samples were collected using dedicated and disposable sampling equipment as described previously in *Interim Subsurface PFAS Investigation Results and Soil Removal Action* (February 4, 2020).

D. Groundwater Sampling

Three rounds of groundwater samples were collected to monitor PFAS concentrations from three existing monitoring locations:

- Transformer Sump (TransSump)
- West Control Building Sump (WCB Sump)
- East Temporary Well (ETW-1)/Monitoring well (MW-1)

In the technical memorandum submitted on February 4, 2020 AECOM recommended replacement of the existing temporary well with a new NR141-compliant monitoring well. ETW-1 was abandoned and replaced (5-feet to the north) by MW-1 on April 20, 2020. MW-1 was developed prior to sampling. The boring log, construction form, and well development records are included in Appendix A of this report.

The sumps and well were purged using a submersible pump or bailer and groundwater samples were collected following appropriate PFAS-free sampling protocols as described in the *Work Plan* and previous memoranda.

E. Product Sampling

On October 29 and 31, 2019, AECOM collected FireAide AFFF (Madison FD) and Phos-Check AFFF (Truax FD) product samples to determine the presence and character of PFAS compounds. Results are presented in *Interim Subsurface PFAS Investigation Results and Soil Removal Action* submitted on February 4, 2020.

F. Sampling and Analytical Methods, Including Preservation and Delivery

Procedures to prevent cross-contamination were followed according to the Work Plan. Samples submitted for analysis were immediately placed in appropriate laboratory-supplied containers, labeled, and maintained in coolers at 4°C. Standard sample chain-of-custody procedures were followed for sample handling and shipment. Samples were submitted to one of the following Wisconsin accredited laboratories:

- Eurofins TestAmerica Laboratory, West Sacramento, CA or
- Vista Analytical Laboratory, El Dorado Hills, CA.

PFAS analyses were conducted following EPA Method 537 (Modified) isotope dilution with reporting of the Wisconsin 36 compound list.

Laboratory reports that were not submitted previously are included in Appendix B of this report.

G. Description of Quality Control and Quality Assurance

A field blank sample was collected and accompanied target samples during each sampling event. Equipment blanks were collected at least once on each type of sampling equipment in direct contact of samples. These included the HDPE bailers, HDPE disposable scoops, and peristaltic pump tubing. Additionally, during installation of monitoring well MW-1, blanks were collected of the decontaminated Geoprobe auger and well screen. Table 4 prevents a summary of blank samples collected during the investigation.

Duplicate grab samples were collected for analysis at a rate of approximately 1 per 10 for samples planned in the SI work plan.

Twenty-seven (27) samples and 3 duplicate soil samples were collected in October 29, 2019 for the site investigation as described in the *Work Plan*. Duplicate samples were not collected for the additional soil samples collected in 2020, due to natural heterogeneity of soils.

Forty-one (41) water samples and 6 field duplicates were collected for the site investigation. Three field duplicates were collected on groundwater and three on surface water.

VII. RESULTS

A. Quality Control

Quality control samples included field duplicates, equipment blanks and field blanks. A total of 28 field and equipment blanks were collected and are presented on Table 4. Of the 1,008 individual analytes (28x36), there were only 44 detections and 35 of those were qualified due to laboratory related contamination. Nine of the 36 analytes had blank detections, while the remaining 25 had none. There were only 9 total detections within the 28 samples not qualified for blank contamination and these detections were all qualified as estimated due to being between the reporting limit and limit of detection.

Equipment blanks were collected on the HDPE sampling scoops used for soil sample collection. No significant PFAS was detected in the samples. PFHxS and PFOSA (in one instance) were detected at low concentrations (<<1 ng/L), however each of these detections were qualified due to laboratory related contamination. Likewise, the water sampling equipment (bailers and tubing) had no significant detections.

Five duplicate soil samples (SS-05, SS-17, SS-34, SS-46, SS-49) were collected. The duplicates pairs generally agreed with an overall average relative percent difference (RPD) of 25%. The RPDs ranged from 0% difference (SS-05/SS-05 FD PFDA) to 90% difference (SS-17/SS-17 FD PFBA). The elevated RPD for SS-17 PFBA is due to the low detected concentrations in addition to laboratory qualification for contamination in the method blank. 6:2 FTS also had a high RPD at SS-17, likely due heterogeneity within the soil.

The average RPD for detections in the six water samples is 8%. This RPD is also skewed higher by some low-level (estimated) detections. When estimated values are excluded, the average RPD is 4%. Therefore, the water samples show good agreement between the sample and duplicate and indicate acceptable quality.

Altogether, the quality of the soil and water samples are acceptable for use in this investigation.

B. Product Results

Product sample results are presented on Table 5. Because of the significantly higher concentrations of PFAS in the product samples, the laboratory reports present the results in units of mg/L, rather than ng/L (which is 1,000,000 times lower). Compounds detected in both the FireAide and Phos-Check include 6:2 FTS, PFBA, PFPeA, PFHxA, PFHxS, and 10:2 FTS. Based on these results, 6:2 FTS is the majority component for both products; however, the concentration in the Phos-Check product was found to be approximately 30 times greater than in the FireAide product. Other PFAS compounds detected at low levels in only one or the other of the products included GenX, PFHpA, APFO, PFOA and PFTeDA.

Based on the PFAS concentrations and reported volumes of each product applied during the fire suppression activities during the fire event, the calculation presented in Table 5 indicates that the Phos-Check product accounts for 50% more of the PFAS mass applied to the site as the FireAide product despite having more than 10 times as much FireAide product being used.

Product	PFAS Concentration (ug/L)	Volume Used (gallons)	Mass of PFAS Applied (mg)
FireAide	2.1	55	0.44
Phos-Chek	40	4	0.61

This calculation estimates that the total PFAS mass released to the site was approximately 1 milligram. Furthermore, given that the AFFF products were reportedly mixed with 140,000 gallons of water, then the applied concentration of the PFAS-water solution calculates to be approximately 1.88 ng/L.

C. Soil Results

Ninety-two (92) target soil samples (duplicates not included) were collected and analyzed for PFAS during this investigation. Soil sample results are presented on Table 2. As expected, the highest concentrations observed during the investigation were soils immediately surrounding the transformer. Concentrations decrease radially from the transformer, with slightly elevated values in areas where the foam-oil-water flow was directed. PFAS was detected in all samples, including background type samples. Low levels of PFAS are widespread in the environment and not unexpected to find detections across all the samples.

The total detected PFAS in the soil samples ranged from 0.032 ug/kg to 320 ug/kg with an average value of 14 ug/kg. For reference, the non-industrial direct contact RCL for PFOA and PFOS is set at 1,260 ug/kg and 1,260,000 ug/kg for PFBS.

At the request of the WDNR, AECOM calculated generic Groundwater Protection (GW) Residual Contaminant Levels (RCLs) for the two PFAS compounds (PFOA and PFOS) that the State of Wisconsin has proposed Chapter NR 140 groundwater standards. Based on the assumptions, both calculated GW RCLs have values that are less than the current laboratory limit of detection (LOD) for PFOA and PFOS. The calculations are presented in *Interim Surface Soil PFAS Results and Groundwater RCL Discussion* submitted June 10, 2020.

Using 6:2 FTS (the primary component of both AFFF products) as an indicator compound, the horizontal extent of AFFF impacts to soil was delineated. Residual PFAS impacts from the AFFF are primarily within the substation; however, low levels of the indicator compound were found outside the substation along the south terrace and possibly one sample outside to the east of the substation. Soil results also appear to indicate that PFOA and PFOS are detected more often and in greater concentration outside the substation and are probably not connected to the AFFF application in July 2019. Additional details of PFAS in soils are presented in the June 10, 2020 memorandum.

As mentioned previously, extensive soil removals were undertaken at the site since the fire. All the areas where 6:2 FTS was detected in excess of 10 ug/kg were excavated. Figure 5 presents the total PFAS concentrations of soil samples from areas that had impacted soil removed. The most significant mass removal was in the immediate vicinity of the former transformer were the AFFF application was concentrated (total PFAS > 100 ug/kg) and the remedial excavations were the largest (by volume). Additional mass removal was achieved by removing visually stained surface soils (total PFAS >10 ug/kg) around the inside of the substation. As shown on Figure 5, the total PFAS concentrations of the removed soils mostly consisted of 6:2 FTS from the AFFF.

PFAS concentrations for residual soils samples within and outside the substation are presented on Figures 6 and 7, respectively. Overall, residual soils within and around the

substation have low total PFAS concentrations of approximately 16 ug/kg or less. The primary residual PFAS within the substation is 6:2 FTS, while outside the substation is a variety of analytes but most notably PFOS. Note the average total PFAS concentration of residual soils inside the substation is 2.4 ug/kg, while it is 6.3 ug/kg outside the substation walls.

Based on this analysis, the source area was addressed to the extent practical through substantial removal actions at the source and in the immediate surrounding area. Furthermore, residual PFAS impacts inside the substation now appear to be on average less than the surrounding area, and the nature of the PFAS impacts outside the substation appear to be unrelated to the AFFF. The AFFF impacts appear to be characterized by the prevalence of 6:2 FTS, whereas PFAS impacts in the surrounding area appear to be characterized by a predominance of PFOS.

D. Water Results

Forty-one (41) water samples and 6 field duplicates were collected and analyzed for PFAS. Three field duplicates were collected on groundwater and three on surface water. PFAS analytes were detected in each analyzed sample. Total PFAS concentrations ranged from 13 ng/L at the Yahara River Outlet to 11,978 ng/L at the Transformer Sump (TransSump). Water sample results are presented on Table 3.

The State of Wisconsin does not currently have groundwater standards for PFAS promulgated in the Chapter NR 140, Wisconsin Administrative Code. However, on November 6, 2020, WDNR and Wisconsin Department of Health Services (WDHS) announced proposed enforcement standards (ES) and preventive action limits (PAL) for 16 PFAS, and 6:2 FTS is not included at this time. The most restrictive standards are the ES of 20 ng/L and PAL of 2 ng/L for 6 combined PFAS, which include PFOA and PFOS. While all groundwater samples exceeded the proposed combined PAL (2 ng/L), none of the groundwater samples from the final sample round exceeded the proposed combined ES (20 ng/L). The highest concentration of PFAS was for 6:2 FTS (primary constituent of AFFF), which was detected ranging from 3,500 to 6,700 ng/L adjacent to the transformer fire where the AFFF was applied. Although 6:2 FTS is currently unregulated, toxicological studies that have been done suggest 6:2 FTS may be less toxic than PFOA or PFOS. For example, an April 2020 ITRC report says, “6:2 FTS toxicity was found to be less than that for either PFOS or PFOA in the same study [of terrestrial invertebrates]”.

Groundwater PFAS concentrations (especially 6:2 FTS) decreased with distance from the area of the transformer fire (AFFF source) as shown in the following table:

Sample ID	Sample Date	Distance from Source (ft)	6:2 FTS (ng/L)	Total Combined PFOA and PFOS (ng/L)	Total PFAS (ng/L)
Trans Sump	10/2/2020	40	4,600	19	9,500
MW-1	8/20/2020	180	1,400	15	4,500
WCB Sump	8/20/2020	320	<1.9	10	42

Because fire suppression water drained into the City of Madison storm sewers, PFAS water samples were also collected from multiple locations to evaluate impacts. From the substation, the City’s storm sewers along Livingston St and East Washington Avenue drain east to the Yahara River, and the storm sewers along Blount Street and Main Street drain southwest to Lake Monona. Therefore, the water samples are ordered from the source to the surface water outfall and also divided into an east set (TransSump, StormCeptor, MW-1,

LVN-6 and River Outlet) and west set (WCB sump, BNT-3, BNT-4, BNT-8, Blount St. Outlet, and Path Outlet). The east set of samples are presented on Figures 8 and 10, while the west set of samples are presented on Figures 9 and 11.

Notable differences are made by observing the total PFAS in Figures 8 and 9 and the normalized (100%) PFAS in Figures 10 and 11. As expected, elevated levels of PFAS exist at the TransSump where the fire occurred. The primary analytes observed here are PFBA, PFPeA, PFHxA, 6:2 FTS, and some PFNA. These analytes were all detected in the AFFF product samples (apart from PFNA which may have been masked by high detection limits). Much lower overall concentrations and a greater variety of analytes are observed in the west samples. Qualitatively, the samples appear different between Figures 10 and 11. While some 6:2 FTS is detected in the July 2019 west samples, the August 2020 west samples are likely indicative of general background PFAS concentrations in the area as described in the following paragraph.

The west samples follow the City's storm sewer to Lake Monona. Immediately after the fire, the AFFF mixture was observed in the Blount street storm sewers. In July 2019, 6:2 FTS was detected in each of the west samples at concentrations ranging from 49 ng/L at BNT-4 to 3 ng/L at the Path Outlet. By October 2019, 6:2 FTS concentrations decreased in the BNT samples and no 6:2 FTS was detected in the Blount St or Path Outlets. In the final sampling for this investigation, no 6:2 FTS was detected in the west samples. Some PFAS analytes not associated with the AFFF, such as PFBS and PFPeS, have remained consistent in the samples while 6:2 FTS decreased. This is an indication of background levels of PFAS existing within the storm system, unrelated to the July 2019 AFFF release. Using 6:2 FTS as the indicator compound, it does not appear that any more migration is occurring from the substation to the west and residual concentrations are likely unrelated to the July 2019 event.

The east samples follow the City's storm sewer to the Yahara River. Concentrations of PFAS within the TransSump have remained relatively consistent over the year of monitoring with total PFAS around 10,000 ng/L. PFAS constituents consistent with the TransSump have been observed at MW-1, the StormCeptor and LVN-6 as shown on Figure 10. Total PFAS at the MW-1 location has remained relatively consistent between October 2019 (ETW-1) and August 2020. The lower value at MW-1 recorded in May 2020 may have been anomalous owing to the recent installation of the monitoring well and ineffective well development.

The elevated PFAS concentrations in the StormCeptor and LVN-6 samples are believed to be related to storm water contacting impacted soils during site excavation work that was being performed concurrent or just before these sampling events. Best management practices were implemented during the excavation work to prevent migration of sediments from disturbed soil, but fugitive dust or water spray may account for these elevated detections at collection points within close proximity to the work in the substation. Because extensive source soil and water removal has since been completed, these elevated concentrations in the StormCeptor and LVN-6 are expected to decrease to background concentrations.

The presence of 6:2 FTS within the StormCeptor and LVN-6 is an indication AFFF Fire suppression water draining from the substation; however, no 6:2 FTS was detected in the River Outlet samples. While PFAS related to AFFF initially drained from the substation, the PFAS concentrations have decreased with time and distance as well as not appearing to reach the Yahara River.

Based on the lack of 6:2 FTS and the prevalence of PFOS in the surface water samples collected at the storm sewer outfalls (Blount St Outlet, Path Outlet, and River Outlet), PFAS impacts from the AFFF application are no longer believed to be present, and the observed PFAS impacts are not related to the residual AFFF-impacts at the substation.

VIII. REMEDIAL ACTIONS AND WASTE DISPOSAL

A. Remedial Actions

The first phase of spill response and cleanup was described in Section III.C.2. Between submission of the SI Work Plan and this report additional soil removal, groundwater extraction and groundwater treatment occurred.

Large amounts of PFAS-impacted water were collected during the spill response and subsequent cleanup and replacement of the destroyed transformer. *Operation & Maintenance Plan and Manual*, submitted on October 3, 2019, described the operation of the temporary water treatment plant. Approximately 150,000 gallons of PFAS impacted water was collected, treated, and discharged under a Wisconsin Pollution Elimination Discharge System (WPDES) permit. Additional details of water treatment are presented in *Start-up Sampling Results - Fire Suppression Water Treatment System* (October 21, 2019) and *Operation and Monitoring Summary - Fire Suppression Water Treatment System* (December 9, 2019).

During the remediation response, a temporary containment area was created for soil dewatering. Soil confirmation samples (CON-1 to CON-5) were collected after the temporary containment was removed. Those results are reported in *Confirmation Soil Results for Containment Pit Area* (November 12, 2019).

Additional soils were excavated and removed following the spill response and cleanup. This included scraping areas underneath the buswork and a large excavation for the replacement transformer (dotted area around SS-13 to SS-16 on Figure 3). Based on waste manifests from September and October 2019, a total of 485.89 tons of PFAS impacted soil were removed. This is documented in *Interim Subsurface PFAS Investigation Results and Soil Removal Action* submitted on February 4, 2020.

Following WDNR's review of the *Interim Surface Soil PFAS Results and Groundwater RCL Discussion*, dated June 10, 2020, three additional areas of residual PFAS-impacted soil greater than 10 ug/kg were removed in July 2020 as shown on Figure 3. NSEC completed the excavations on the southern, eastern, and central portions of the substation with an approximate volume removed of 20 cubic yards. Soil confirmation samples SS-79 to SS-81 were collected after the July removal action.

Additional source removal was accomplished through the construction excavation for the repairs to ATC's underground transmission line as shown on Figure 3. The excavation was approximately 8 by 30 by 10 feet. Based on waste manifests from March and July 2020, a total of 505.06 tons of PFAS-impacted soil was removed and disposed at US Ecology's Wayne Disposal Facility in Belleville, Michigan.

During the excavation work in July 2020, PFAS-impacted excavation water was also removed and contained for disposal. Approximately 12,500 gallons of excavation water was transported for solidification and disposal offsite.

All PFAS-impacted soils removed from the substation were disposed as nonhazardous special waste at US Ecology's Wayne Disposal Facility in Belleville, Michigan. The disposal approval letter and copies of waste manifests are included in Appendix C.

The following table summarizes the scope of the removal actions undertaken to remediate PFAS-impacted media (soil and water) and compares the estimated average PFAS

concentrations in the affected media (based on PFAS mass released) and the actual average PFAS concentrations (based on site samples):

PFAS-impacted Media	Media Removed Volumes	Total PFAS Released (mg)[1]	Estimated Average Total PFAS Concentration[2]	Actual Average Total PFAS Concentration[3]
Soil	1,000 tons	1	1.10 ng/kg	13.91 ng/kg
Water	165,000 gallons	1	1.56 ng/L	1,150 ng/L

[1] Based on product analysis and AFFF used, total PFAS released was 1 milligram.

[2] Assumes that the total PFAS mass is evenly distributed throughout the media.

[3] Calculated average of total PFAS from samples collected during site investigation.

As noted in the table, the average total PFAS concentrations are based on idealized assumptions. For the estimated average total PFAS concentration, the result assumes even mixing throughout the impacted media, where the distribution in the environment is generally concentrated at the source for soil and at a collection point for water. For the actual average total PFAS concentration, the result is an average of all samples from the site investigation and includes samples of media that were removed and also remained onsite.

The comparison of the estimated and actual average total PFAS concentrations indicates that the removed volumes of soil and water were sufficiently large and directed at the sources to have removed the AFFF-related PFAS mass (1 mg) several times over.

B. Investigative Waste Handling

Soils, groundwater and decontamination water generated during the investigation were placed in sealed 55-gallon drums and disposed along with soil and water from the removal actions described in the section above.

Investigation-derived wastes were disposed as nonhazardous special waste at US Ecology's Wayne Disposal Facility in Belleville, Michigan.

IX. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

Overall, the PFAS site investigation was completed according to the Site Investigation Work Plan (October 15, 2019). As described in the Work Plan, the site is also a closed ERP site (BRRTS# 02-13-001567) related to a former manufactured gas plant (MGP), which was closed with residual soil and groundwater contamination. Because of the previous site investigation work completed, the current site investigation focused on the residual PFAS-impacts from the release of AFFF and relied on the existing characterization for the site geology and hydrogeology. The conceptual site model consists of the following:

- Surficial site soils from ground surface to a depth of 4 to 20 ft of various historic fill and construction debris;
- Lacustrine deposits underlying the surficial fill soils to estimated depths of 25 to 35 ft with depth to bedrock anticipated to be over 100 ft below ground surface;
- Water table underlying the site a depth of 4 to 6 ft that fluctuates with precipitation events and lake level changes (most notable Lake Monona).
- The water table is generally flat across the site, but regional shallow groundwater flow is interpreted to the south across the isthmus from Lake Mendota (NWL 849 ft MSL) to the southeast toward Lake Monona (NWL 844 ft MSL).

Based on AFFF-product testing, the primary PFAS constituent released during the fire suppression event in July 2019 was 6:2 FTS. Using the PFAS concentrations from the AFFF-product testing and the known volume of product used, the total PFAS mass released to the site was calculated to be approximately 1 milligram. Given that the AFFF product was mixed with 140,000 gallons of fire-suppression water, the applied concentration of the PFAS-water solution calculates to be approximately 1.88 ng/L, which is less than proposed PFAS groundwater standards.

Following the extensive spill response, additional soil and water removals, the source and immediate surrounding area was addressed to the extent practical. The following PFAS-impacted media were removed from the site during response and remedial actions:

- 140,000 gallons of collected water from adjacent storm sewers;
- 12,500 gallons of water from dewatering of source excavation;
- 1,000 tons of soil from source soil excavation and residual surface soil scraping.

Based on surface soil sample results, only low levels of residual 6:2 FTS and other PFAS analytes remain in soils at the substation. The average total PFAS concentration inside the substation is 2.4 ug/kg, while it is 6.3 ug/kg outside the substation walls. These residual concentrations are substantially below the nonindustrial direct contact RCLs for PFOA and PFOS, and 6:2 FTS is unregulated. Furthermore, given the PFAS constituents identified in soil samples, the nature of the PFAS impacts outside the substation appear to be unrelated to the AFFF.

The State of Wisconsin does not currently have groundwater standards for PFAS, but WDNR and WDHS recently proposed enforcement standards (ES) and preventive action limits (PAL) for 16 PFAS, and 6:2 FTS is not included at this time. The most restrictive standards are the ES of 20 ng/L and PAL of 2 ng/L for 6 combined PFAS, which include PFOA and

PFOS. While all groundwater samples at the substation exceeded the proposed combined PAL (2 ng/L), none of the groundwater samples from the final sample round exceeded the proposed combined ES (20 ng/L). Although elevated concentrations of 6:2 FTS were observed at two monitoring points (TransSump and MW-1), they do not appear to be increasing and are expected to decrease with time given that substantial source removal has been completed. Overall, given the limited PFAS-mass released and the substantial removal actions completed, groundwater concentrations are expected to be stable or decreasing with time.

Because fire suppression water drained into the storm sewers, PFAS water samples were also collected from multiple locations to evaluate impacts. Based on the lack of 6:2 FTS and the prevalence of unrelated PFAS in the surface water samples collected at the storm sewer outfalls (Blount St Outlet, Path Outlet, and River Outlet), PFAS impacts from the AFFF application do not appear to be present. Elevated detections of PFAS in two storm catchments directly connected to the interior of the substation (StormCeptor and LVN-6) are likely related to stormwater contacting PFAS-impacted soil during removal actions conducted in September 2019 and July 2020. As with the groundwater results, although these water samples exceed the proposed combined PAL (2 ng/L), none from the final round exceed the proposed combined ES (20 ng/L).

Therefore, the site investigation has successfully characterized the residual PFAS-impacts related to the release of AFFF product in response to the transformer fire on July 19, 2019. The primary component of the AFFF is 6:2 FTS, which was used to guide remedial efforts and also to distinguish AFFF impacts from background PFAS-impacts that were characterized by a higher occurrence of PFOA and PFOS not found at the substation. Extensive source removal at the site has removed to the extent practical PFAS-impacted soil and water related to the AFFF release. Based on these findings, the residual PFAS impacts are not believed to pose an unacceptable risk to receptors via direct contact, vapor, or groundwater.

B. Recommendations

Based on results of the site investigation, AECOM recommends proceeding to site closure with no further action. The site will be listed with residual PFAS soil and groundwater contamination in addition to the MGP-impacts already posted on the WDNR's Registry of Closed Sites. ATC will make formal notifications of the residual contamination in letters to MG&E as the property owner and the City of Madison for the public rights-of-way. Once case closure is granted, ATC will properly abandon groundwater monitoring locations.

We also recommend that the WDNR continue with the promulgation of emergency rule Chapter NR159, Wisconsin Administrative Code, Management of Class B Fire Fighting Foam. If the provision of this rule had been in effect at the time of the fire in July 2019, we believe that the impacts caused by the use of the AFFF to suppress this fire could have been reduced. The following rule provisions may have made a difference to the impact and level of effort to remediate the site:

- The proposed rule prohibits discharge of foam to the storm or sanitary sewer system. In this instance, firefighters reportedly directed the excess fire suppression water into storm sewer catch basins. Fortunately, ATC's emergency response contractors initiated plugging of the storm sewers and deployment of containment booms and subsequently removed 140,000 gallons of water from the storm sewer system for treatment and disposal.

- The proposed rule allows for treatment and discharge of fire suppression water to remove PFAS to the extent practical. In this instance, ATC needed to store the 140,000 gallons of PFAS-impacted water while developing an adequate treatment system design. In the absence of this rule, ATC's system was required to achieve non-detect limits for PFAS prior to discharge. The rule also provides for minimum system design and operation requirements that also rely on the use of non-PFAS indicator parameters for system operation requirements.
- The proposed rule specifies to have PFAS-impacted solids disposed in licensed solid waste facility. However, during the time of this site investigation and remediation, licensed solid waste (Subtitle D) facilities in Wisconsin would not accept PFAS-impacted solid waste. Furthermore, because of the lack of promulgated PFAS standards, the only licensed facilities willing to accept PFAS impacted solid waste were hazardous waste (Subtitle C) facilities. Therefore, the 1,000 tons of PFAS-impacted solid waste from this site had to be disposed at an out-of-state hazardous waste facility incurring significant transportation and disposal costs.

TABLES

Table 1
Sample Inventory
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

AECOM

Sample ID	Location Notes	Sample Date	Lab SDG	Sampled By	Matrix	Analysis Performed		
						PFAS	DRO	PCB
Breaker Soil	Center Inside SS	7/19/2019	320-52453-1	NSEC	Soil	x		
			500-167039-1					x
Catch Basin Water	east side catch basin		320-52453-1	NSEC	Water	x		
Surface Water	on-site NE of trans.		500-167039-1	NSEC	Water			x
			320-52453-1			x		
LW1	Structure #IN 5247-117		500-167041-1	SCS	Water	x		x
LW (Basin)	Structure # IN 5247-117		320-52453-1	NSEC	Water	x		
			500-167039-1					x
LW2	Structure #IN 5247-117		500-167041-1	SCS Split	Water	x		x
Blount Street	Structure # IN 5248-009		320-52453-1	NSEC	Water	x		
			500-167039-1					x
Blount Street			500-167041-1	SCS Split	Water	x		x
Catch Basin Oil	east side catch basin		320-52453-1	NSEC	Oil	Cancelled		
			500-167039-1					x
Main & Blount			500-167039-1	NSEC	Oil			x
Stained Soil		7/23/2019	500-167154-1	NSEC	Soil		x	
SS-01	Outside SS Terrace	7/24/2019	500-167225-1 (DRO) 500-167225-2 (PFAS)	AECOM	Soil	x	x	
SS-02						x	x	
SS-03						x	x	
SS-04						x	x	
SS-05						x	x	
SS-06						x	x	
SS-07						x	x	
SS-08						x	x	
SS-09						x	x	
SS-10						x	x	
SS-11						x	x	
SS-12						x	x	
SS-13	Gravel around former transformer					x	x	
SS-14						x	x	
SS-15						x	x	
SS-16						x	x	
SS-17	5ft from Storm Ceptor (E wall)					x	x	
North Power Pole	on-site E of trans.				Water	x		
Storm Ceptor	east side catch basin		320-52698-1	AECOM	Water	x		
River Outlet	Yahara River outlet					x		
Blount St Outlet	Monona Blount outlet					x		
Path Outlet	Monona Blount outlet					x		
LVN-6	Structure #IN 5247-115					x		
BNT-3	Square grate - main & blount					x		
BNT-4	Structure #IN 5248-028					x		
BNT-8	Structure #IN 5248-009					x		
SS-18	East wall inside SS	7/26/2019	500-167417-1 (DRO) 500-167417-2 (PFAS)	AECOM	Soil	x	x	
SS-19						x	x	
SS-20	South wall inside SS					x	x	
SS-21						x	x	
SS-22						x	x	
SS-23						x	x	
SS-24						x	x	
SS-25						x	x	
SS-26						x	x	
SS-27						x	x	
SS-28						x	x	
West Wall Manhole	Outside SS		500-167410-1	NSEC	Oil			x
WC-1	Sump	8/6/2019	500-167874-1	AECOM	Water	See Notes		
WC-2	NE Corner Excavation				Soil			
WC-3	Frac Tank SW				Water			
WC-4	Roll Off (Cap Barrier)				Soil			
RES-SS-01	Outside SS Terrace	8/8/2019	500-168051-1	AECOM	Soil	x	x	
RES-SS-08						x	x	
RES-SS-12						x	x	

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Sample Inventory
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Sample ID	Location Notes	Sample Date	Lab SDG	Sampled By	Matrix	Analysis Performed		
						PFAS	DRO	PCB
CON-1	East Washington Dewatering Area	8/28/2019	320-53858-1	AECOM	Soil	x		
CON-2						x		
CON-3						x		
CON-4						x		
CON-5						x		
OWS	Treatment System Monitoring	10/8/2019	500-171404-1 and 1903574	AECOM	Water		x	
INLET						x	x	
BAG 2						x	x	
ZEO						x	x	
GAC 1						x	x	
GAC 2						x	x	
DISCHARGE						See Notes		
River Outlet	Yahara River outlet	10/28/2019	320-55756-1	AECOM	Water	x		
Blount St Outlet	Monona Blount outlet					x		
Path Outlet	Monona Blount outlet					x		
LVN-6	Structure #IN 5247-115					x		
BNT-3	Square grate - main & blount					x		
BNT-4	Structure #IN 5248-028					x		
Storm Ceptor	east side catch basin					x		
WCB Sump	West side sump					x		
ETW-1	Temporary well off Livingstone					x		
Trans Sump	Large sump near former transformer					x		
BNT-8	Structure #IN 5248-009					x		
SS-29	Inside SS Grid	10/29/2019	320-55814-1	AECOM	Soil	x		
SS-30						x		
SS-31						x		
SS-32						x		
SS-33						x		
SS-34						x		
SS-35						x		
SS-36						x		
SS-37						x		
SS-38						x		
SS-39						x		
SS-40						x		
SS-41						x		
SS-42						x		
SS-43						x		
SS-44						x		
SS-45						x		
SS-46						x		
SS-47						x		
SS-48						x		
SS-49						x		
SS-50						x		
SS-51						x		
SS-52						x		
SS-53						x		
SS-54						x		
SS-55						x		
FireAde AFFF	Madison FD	10/29/2019	320-55913-1	AECOM	Product	x		
Phos-Check AFFF	Truax FD	10/31/2019	320-55912-1	AECOM	Product	x		

Table 1
Sample Inventory
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Sample ID	Location Notes	Sample Date	Lab SDG	Sampled By	Matrix	Analysis Performed		
						PFAS	DRO	PCB
SS-56	North wall Inside SS	4/7/2020	320-60052-1	AECOM	Soil	x		
SS-57						x		
SS-58						x		
SS-59						x		
SS-60						x		
SS-61						x		
SS-62	S Livingston St - W terrace					x		
SS-63						x		
SS-64						x		
SS-66						x		
SS-67						x		
MW-1	East Control Building Terrace					x		
SS-65						x		
SS-68						x		
SS-69	E Main St - N terrace					x		
SS-72						x		
SS-70	E Main St - S terrace					x		
SS-71						x		
SS-73						x		
SS-74	S Blount St - W terrace					x		
SS-75	E Washington Ave -N terrace					x		
SS-76						x		
SS-77	S Livingston St - E terrace					x		
SS-78						x		
Trans Sump	Large sump near transformer	5/21/2020	320-61091-1	AECOM	Water	x		
WCB Sump	West side sump					x		
MW-1	Temporary well off Livingstone					x		
SS-79	Confirmation soil samples inside substation	7/9/2020	500-184788-1	AECOM	Soil	x		
SS-80						x		
SS-81						x		
SS-82		7/10/2020				x		
River Outlet	Yahara River outlet	8/20/2020	320-63888-1	AECOM	Water	x		
Blount St Outlet	Monona Blount outlet					x		
Path Outlet	Monona Blount outlet					x		
LVN-6	Structure #IN 5247-115					x		
BNT-3	Square grate - main & blount					x		
BNT-4	Structure #IN 5248-028					x		
Storm Ceptor	east side catch basin					x		
WCB Sump	West side sump					x		
MW-1	Temporary well off Livingstone					x		
BNT-8	Structure #IN 5248-009					x		
Trans Sump	Sump near transformer	10/2/2020	320-65285-1	AECOM	Water	x		

Notes:
Table is sorted by sample date - Oldest to Newest
WC-1 was analyzed for VOC, SVOC, O&G HEM, RCRA Metals, pH, Flash Point, mercury, cyanide, phenol, sulfate
WC-2 was analyzed for VOC, SVOC, DRO, PFAS, RCRA Metals, pesticides, herbicides, PCBs, pH, Flash Point, mercury, cyanide, phenol, paint filter, reactive sulfide
WC-3 was analyzed for VOC, SVOC, DRO O&G HEM, RCRA Metals, pH, flash point
WC-4 was analyzed for VOC, SVOC, RCRA Metals, pH, flash point, mercury, cyanide, phenol, paint filter, reactive sulfide
"DISCHARGE" was analyzed for total BETX, PAHs, PFAS, DRO, BOD, Oil and Grease, and pH
NS = not sampled
x = submitted to laboratory for analysis
WC = Waste Characterization
SS = Blount Substation
NSEC = North Shore Environmental Construction, Inc.
SCS = SCS Engineers
PFAS = per- and polyfluoroalkyl substances
DRO = diesel range organics
PCB = polychlorinated biphenyl
RES = Resampled

AECOM

Table 2
Soil Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Parameters		Generic RCLs			BREAKER SOIL	CON-1	CON-2	CON-3	CON-4	CON-5	SS-01	RES-SS-01	SS-02	SS-03	SS-04	SS-05	SS-05 FD	SS-06
		Non-Industrial	Industrial	Groundwater Pathway	Surface 7/19/2019	2 " 8/28/2019	2 " 8/28/2019	2 " 8/28/2019	2 " 8/28/2019	2 " 8/28/2019	8 " 7/24/2019	12 " 8/8/2019	9 " 7/24/2019	10 " 7/24/2019	8 " 7/24/2019	7 " 7/24/2019	7 " 7/24/2019	9 " 7/24/2019
PFAS (ug/kg)	**ABBR.**																	
Perfluorobutanoic acid	PFBA	--	--	--	0.16 J B	0.11 J	< 0.028	0.032 J	0.11 J	0.084 J	0.37 B	0.22 J	0.17 JB	0.13 JB	0.44 B	0.15 JB	0.16 JB	0.39 B
Perfluorobutanesulfonic acid	PFBS	1,260,000	16,400,000	--	< 0.026	0.066 JB	0.066 JB	< 0.025	0.077 J	< 0.026	< 0.027	< 0.031	< 0.026	< 0.027	< 0.031	0.045 J	0.047 J	< 0.031
4:2 Fluorotelomer Sulfonic Acid	4:2 FTS	--	--	--	< 0.39	< 0.37	< 0.37	< 0.37	< 0.40	< 0.38	< 0.40	< 0.46	< 0.38	< 0.39	< 0.46	< 0.44	< 0.44	< 0.45
Perfluoropentanoic acid	PFPeA	--	--	--	< 0.080	0.084 J	< 0.077	< 0.077	0.12 J	< 0.080	1.3	2.7	0.56	0.33	2.6	< 0.092	0.17 J	0.67
Perfluoropentane Sulfonic Acid	PFPeS				< 0.021	< 0.020	< 0.020	< 0.020	0.035 J	< 0.021	< 0.022	< 0.025	< 0.021	< 0.021	< 0.025	< 0.024	< 0.024	< 0.024
Perfluorohexanoic acid	PFHxA	--	--	--	< 0.044	0.071 J	< 0.042	< 0.042	0.13 J	< 0.044	0.56	1.2	0.17 J	0.18 J	0.95	0.13 J	0.13 J	0.41
Perfluorohexanesulfonoic acid	PFHxS	--	--	--	< 0.032	< 0.031	< 0.031	< 0.031	0.049 J	< 0.032	0.055 J	0.18 J	0.047 J	0.078 J	0.066 J	0.053 J	0.069 J	0.093 J
6:2 Fluorotelomer sulfonic acid	6:2 FTS	--	--	--	7.7 F1	0.44 J	< 0.15	< 0.15	0.17 J	< 0.16	0.74 J	1.9 J	0.16 J	0.17 J	1.1 J	1.1 J	< 0.18	< 0.18
Perfluoroheptanoic acid	PFHpA	--	--	--	< 0.030	< 0.029	< 0.029	< 0.029	0.080 J	< 0.030	0.29	0.37	0.11 J	0.093 J	0.37	0.073 J	0.067 J	0.20 J
Perfluoroheptanesulfonic acid	PFHpS	--	--	--	< 0.037	< 0.035	< 0.035	< 0.035	0.042 J	< 0.036	< 0.038	< 0.044	< 0.036	< 0.037	< 0.044	< 0.042	< 0.042	< 0.043
Perfluorooctanoic acid	PFOA	1,260	16,400	--	< 0.09	< 0.087	< 0.086	< 0.086	0.10 J	< 0.089	0.11 J	0.27	< 0.088	< 0.091	0.27	0.25	0.30	0.44
Ammonium Perfluorooctanoate	APFO	--	--	--	< 0.093	< 0.090	< 0.089	< 0.089	0.11 J	< 0.092	0.12 J	0.29	< 0.091	< 0.095	0.28	0.26	0.31	0.46
Perfluorooctanesulfonic acid	PFOS	1,260	16,400	--	< 0.21	< 0.20	< 0.20	< 0.20	< 0.22	< 0.21	0.91	4.7	0.40 J	0.39 J	1.2	1.5	1.8	1.2
8:2 Fluorotelomer sulfonic acid	8:2 FTS	--	--	--	< 0.26	< 0.25	< 0.25	< 0.25	< 0.27	< 0.26	< 0.27	< 0.31	< 0.26	< 0.27	< 0.31	< 0.30	< 0.30	< 0.31
Perfluorononaoic acid	PFNA	--	--	--	< 0.038	< 0.036	< 0.036	< 0.036	0.043 J	< 0.037	0.061 J	0.16 J	< 0.037	< 0.038	0.10 J	0.13 J	0.14 J	0.16 J
Perfluorononanesulfonic Acid	PFNS	--	--	--	< 0.021	< 0.020	< 0.020	< 0.020	0.039 J	< 0.021	< 0.022	< 0.025	< 0.021	< 0.021	< 0.025	< 0.024	< 0.024	< 0.024
Perfluorodecanoic acid	PFDA	--	--	--	< 0.023	< 0.022	< 0.022	< 0.022	0.045 J	< 0.023	0.19 J	0.6	0.26	0.12 J	0.54	0.34	0.34	0.93
Perfluorodecanesulfonic acid	PFDS	--	--	--	< 0.041	< 0.040	< 0.039	< 0.039	< 0.042	< 0.040	< 0.042	0.72	0.053 J	< 0.041	0.13 J	0.050 J	0.084 J	0.21 J
10:2 Fluorotelomer Sulfonic Acid	10:2 FTS	--	--	--	< 0.052 F1	< 0.051	< 0.050	< 0.050	< 0.054	< 0.052	< 0.054	< 0.063	< 0.051	< 0.053	< 0.062	< 0.060	< 0.059	< 0.061
Perfluoroundecanoic acid	PFUnA	--	--	--	< 0.038	< 0.036	< 0.036	< 0.036	0.046 J	< 0.037	0.051 J	0.14 J	0.11 J	0.043 J	0.17 J	0.062 J	0.067 J	0.39
Perfluorododecanoic acid	PFDoA	--	--	--	< 0.07	< 0.068	< 0.067	< 0.067	< 0.072	< 0.069	0.073 J	0.25	0.16 J	0.21	0.43	0.092 J	0.082 J	1.0
Perfluorododecanesulfonic acid	PFDoS	--	--	--	< 0.063	< 0.061	< 0.060	< 0.060	< 0.065	< 0.062	< 0.065	< 0.075	< 0.062	< 0.064	< 0.075	< 0.072	< 0.071	< 0.073
Perfluorotridecanoic acid	PFTrDA	--	--	--	< 0.053	< 0.052	< 0.051	< 0.051	< 0.055	< 0.053	< 0.055	< 0.064	< 0.052	0.094 J	0.080 J	< 0.061	< 0.061	0.22 J
Perfluorotetradecanoic acid	PFTeDA	--	--	--	< 0.056	< 0.055	< 0.054	< 0.054	< 0.058	< 0.056	< 0.058	< 0.068	0.060 J	0.26	0.23 J	< 0.065	< 0.064	0.56
Perfluorohexadecanoic acid	PFHxDA	--	--	--	< 0.046 * F1	< 0.045	< 0.044	< 0.044	< 0.047	< 0.046 F1	< 0.047 F1	< 0.055	< 0.045	0.054 J*	0.075 J*	< 0.053	< 0.052	0.15 J*
Perfluorooctadecanoic acid	PFODA	--	--	--	< 0.029 * F1	< 0.028	< 0.028	< 0.028	0.035 J*	< 0.029 F1	< 0.030 F1	< 0.035	< 0.029	< 0.030	< 0.035	< 0.033	< 0.033	0.035 J*
HFPO-DA	GenX	--	--	--	< 0.11	< 0.11	< 0.11	< 0.11	< 0.12	< 0.11	< 0.12	< 0.14	< 0.11	< 0.12	< 0.14	< 0.13	< 0.13	< 0.13
4,8-dioxa-3H-perfluorononanoic acid	DONA	--	--	--	< 0.019	< 0.018	< 0.018	< 0.018	0.031 J	< 0.019	< 0.019	< 0.023	< 0.019	< 0.019	< 0.022	< 0.022	< 0.021	< 0.022
NaDONA	NaDONA	--	--	--	< 0.02	< 0.019	< 0.019	< 0.019	0.033 J	< 0.020	< 0.020	< 0.024	< 0.020	< 0.020	< 0.024	< 0.023	< 0.023	< 0.023
ADONA	ADONA	--	--	--	< 0.02	< 0.019	< 0.019	< 0.019	0.033 J	< 0.020	< 0.020	< 0.024	< 0.020	< 0.020	< 0.024	< 0.023	< 0.023	< 0.023
Perfluorooctane sulfonamide	PFOSA	--	--	--	< 0.086	< 0.083	< 0.082	< 0.082	< 0.088	< 0.085	< 0.088	< 0.10	< 0.084	< 0.087	< 0.10	< 0.098	< 0.097	< 0.10
N-Ethyl perfluorooctane sulfonamide	NEtFOSA	--	--	--	NA	< 0.024	< 0.024	< 0.024	< 0.026	< 0.025	NA	NA	NA	NA	NA	NA	NA	NA
N-Ethyl perfluorooctane sulfonamidoethanol	NEtFOSE	--	--	--	NA	< 0.036	< 0.036	< 0.036	< 0.039	< 0.037	NA	NA	NA	NA	NA	NA	NA	NA
N-Methyl perfluorooctane sulfonamide	NMeFOSA	--	--	--	NA	< 0.042	< 0.041	< 0.041	< 0.044	< 0.042	NA	NA	NA	NA	NA	NA	NA	NA
N-Methyl perfluorooctane sulfonamidoethanol	NMeFOSE	--	--	--	NA	< 0.072	< 0.071	< 0.071	< 0.077	< 0.074	NA	NA	NA	NA	NA	NA	NA	NA
MeFOSAA	MeFOSAA	--	--	--	< 0.41	< 0.40	< 0.39	< 0.39	< 0.42	< 0.40	< 0.42	< 0.49	< 0.40	< 0.41	< 0.49	< 0.47	< 0.46	< 0.48
EtFOSAA	EtFOSAA	--	--	--	< 0.39	< 0.37	< 0.37	< 0.37	< 0.40	< 0.38	< 0.40	< 0.46	< 0.38	< 0.39	< 0.46	< 0.44	< 0.44	< 0.45
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic ac	F-53B Major	--	--	--	< 0.028	< 0.027	< 0.027	< 0.027	0.041 J	< 0.028	< 0.029	< 0.034	< 0.028	< 0.029	< 0.034	< 0.032	< 0.032	< 0.033
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic ac	F-53B Minor	--	--	--	< 0.023	< 0.022	< 0.022	< 0.022	0.028 J	< 0.023	< 0.024	< 0.028	< 0.023	< 0.023	< 0.027	< 0.026	< 0.026	< 0.027
Total PFAS		--	--	--	8	1	0	0	1	0	5	14	2	2	9	4	4	8

AECOM

Table 2
Soil Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Parameters		Generic RCLs			SS-07	SS-08	RES-SS-08	SS-09	SS-10	SS-11	SS-12	RES-SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-17 FD
		Non-Industrial	Industrial	Groundwater Pathway	9 "	10 "	12 "	8 "	9 "	8 "	9 "	12 "	Surface	Surface	Surface	Surface	Surface	Surface
					7/24/2019	7/24/2019	8/8/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	8/8/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019	7/24/2019
PFAS (ug/kg)	**ABBR.**																	
Perfluorobutanoic acid	PFBA	--	--	--	0.15 JB	0.099 JB	0.15 J	0.13 JB	0.13 JB	0.20 JB	< 0.034	0.27 J	1.3 B	4.4 B	1.6 B	2.0 B	0.58 B	0.22 B
Perfluorobutanesulfonic acid	PFBS	1,260,000	16,400,000	--	< 0.026	< 0.028	< 0.031	0.048 J	< 0.026	0.061 J	0.065 J	< 0.037	< 0.027	< 0.026	< 0.025	< 0.028	< 0.027	< 0.027
4:2 Fluorotelomer Sulfonic Acid	4:2 FTS	--	--	--	< 0.39	< 0.42	< 0.46	< 0.46	< 0.38	< 0.45	< 0.46	< 0.55	< 0.40	< 0.38	< 0.38	< 0.42	< 0.40	< 0.40
Perfluoropentanoic acid	PFPeA	--	--	--	0.29	0.42	0.63	0.18 J	0.17 J	0.36	< 0.095	0.44	0.30	0.56	0.25	0.40	0.59	0.43
Perfluoropentane Sulfonic Acid	PFPeS				< 0.021	< 0.022	< 0.025	< 0.025	< 0.021	< 0.024	< 0.025	< 0.030	< 0.022	< 0.021	< 0.020	< 0.022	< 0.022	< 0.022
Perfluorohexanoic acid	PFHxA	--	--	--	0.15 J	0.17 J	0.28	0.17 J	0.073 J	0.28	0.058 JI	0.15 J	1.7	3.7	2.0	2.4	0.43	0.26
Perfluorohexanesulfonoic acid	PFHxS	--	--	--	< 0.033	0.035 J	< 0.039	0.096 J	0.042 J	0.058 J	0.17 J	0.14 J	< 0.034	< 0.032	< 0.032	< 0.035	< 0.033	< 0.034
6:2 Fluorotelomer sulfonic acid	6:2 FTS	--	--	--	0.29 J	1.3 J	0.87 J	< 0.19	< 0.16	< 0.18	< 0.18	0.36 J	120	310	140	140	15	6.6
Perfluoroheptanoic acid	PFHpA	--	--	--	0.062 J	0.13 J	0.16 J	0.12 J	0.062 J	0.27	0.11 J	0.10 J	0.075 J	0.16 J	0.040 JI	0.075 J	0.087 J	0.067 JI
Perfluoroheptanesulfonic acid	PFHpS	--	--	--	< 0.037	< 0.039	< 0.044	< 0.043	< 0.036	< 0.043	< 0.043	< 0.052	< 0.038	< 0.036	< 0.036	< 0.039	< 0.038	< 0.038
Perfluorooctanoic acid	PFOA	1,260	16,400	--	< 0.091	0.16 J	< 0.11	0.39	0.20 J	0.85	0.71	0.36	< 0.093	< 0.089	< 0.087	< 0.097	< 0.093	< 0.094
Ammonium Perfluorooctanoate	APFO	--	--	--	< 0.094	0.17 J	< 0.11	0.41	0.21 J	0.88	0.73	0.37	< 0.096	< 0.092	< 0.090	< 0.10	< 0.096	< 0.097
Perfluorooctanesulfonic acid	PFOS	1,260	16,400	--	0.22 J	0.58	< 0.25	1.6	0.50 J	1.6	2.7	2.9	< 0.22	< 0.21	0.26 JI	0.32 JI	< 0.22	< 0.22
8:2 Fluorotelomer sulfonic acid	8:2 FTS	--	--	--	< 0.26	< 0.28	< 0.31	< 0.31	< 0.26	< 0.30	< 0.31	< 0.37	< 0.27	1.4 J	< 2.5	< 0.28	0.30 J	< 0.27
Perfluorononaoic acid	PFNA	--	--	--	< 0.038	0.10 J	< 0.045	0.12 J	0.065 J	0.29	0.30	0.13 J	< 0.039	< 0.037	< 0.037	< 0.040	< 0.039	< 0.039
Perfluorononanesulfonic Acid	PFNS	--	--	--	< 0.021	< 0.022	< 0.025	< 0.025	< 0.021	< 0.024	< 0.025	< 0.030	< 0.022	< 0.021	< 0.020	< 0.022	< 0.022	< 0.022
Perfluorodecanoic acid	PFDA	--	--	--	0.17 J	0.21 J	0.081 JI	0.38	0.31	0.76	0.30	0.41	< 0.024	< 0.023	< 0.022	< 0.025	< 0.024	< 0.024
Perfluorodecanesulfonic acid	PFDS	--	--	--	< 0.041	0.057 J	< 0.049	0.12 J	0.045 J	0.060 J	< 0.048	0.29 J	< 0.042	< 0.040	< 0.040	< 0.044	< 0.042	< 0.043
10:2 Fluorotelomer Sulfonic Acid	10:2 FTS	--	--	--	< 0.053	< 0.056	< 0.063	< 0.062	< 0.052	< 0.061	< 0.061	< 0.074	< 0.054	0.64	< 0.051	< 0.056	0.14 J	< 0.055
Perfluoroundecanoic acid	PFUnA	--	--	--	0.11 J	0.095 J	< 0.045	0.11 J	0.088 J	0.089 J	0.048 J	0.10 J	0.043 J	< 0.037	< 0.037	0.049 J	< 0.039	< 0.039
Perfluorododecanoic acid	PFDoA	--	--	--	0.24	0.17 J	< 0.084	0.17 J	0.19 J	0.15 J	0.096 J	0.17 J	< 0.072	< 0.069	< 0.068	< 0.075	< 0.072	< 0.073
Perfluorododecanesulfonic acid	PFDoS	--	--	--	< 0.063	< 0.067	< 0.075	< 0.074	< 0.062	< 0.073	< 0.074	< 0.089	< 0.065	< 0.062	< 0.061	< 0.067	< 0.065	< 0.066
Perfluorotridecanoic acid	PFTrDA	--	--	--	< 0.054	< 0.057	< 0.064	< 0.063	< 0.053	< 0.062	< 0.063	< 0.075	< 0.055	< 0.053	< 0.052	0.087 J	< 0.055	< 0.056
Perfluorotetradecanoic acid	PFTeDA	--	--	--	0.068 J	0.076 J	< 0.068	0.074 J	0.091 J	0.091 J	< 0.066	< 0.080	< 0.058	< 0.056	< 0.055	0.064 J	< 0.058	< 0.059
Perfluorohexadecanoic acid	PFHxDA	--	--	--	< 0.047	< 0.049	< 0.055	< 0.054	< 0.045	< 0.054	< 0.054	< 0.065	< 0.048	< 0.045	< 0.045	< 0.049	< 0.047	< 0.048
Perfluorooctadecanoic acid	PFODA	--	--	--	< 0.030	< 0.031	< 0.035	< 0.035	< 0.029	< 0.034	< 0.034	< 0.041	< 0.030	< 0.029	< 0.028	< 0.031	< 0.030	< 0.031
HFPO-DA	GenX	--	--	--	< 0.12	< 0.12	< 0.14	< 0.14	< 0.11	< 0.13	< 0.14	< 0.16	< 0.12	< 0.11	< 0.11	< 0.12	< 0.12	< 0.12
4,8-dioxa-3H-perfluorononanoic acid	DONA	--	--	--	< 0.019	< 0.020	< 0.023	< 0.022	< 0.019	< 0.022	< 0.022	< 0.027	< 0.019	< 0.019	< 0.018	< 0.020	< 0.019	< 0.020
NaDONA	NaDONA	--	--	--	< 0.020	< 0.021	< 0.024	< 0.023	< 0.020	< 0.023	< 0.023	< 0.028	< 0.021	< 0.020	< 0.019	< 0.021	< 0.020	< 0.021
ADONA	ADONA	--	--	--	< 0.020	< 0.021	< 0.024	< 0.023	< 0.020	< 0.023	< 0.023	< 0.028	< 0.021	< 0.020	< 0.019	< 0.021	< 0.020	< 0.021
Perfluorooctane sulfonamide	PFOSA	--	--	--	< 0.087	< 0.092	< 0.10	< 0.10	< 0.085	< 0.10	< 0.10	< 0.12	< 0.089	< 0.085	< 0.083	< 0.092	< 0.088	< 0.090
N-Ethyl perfluorooctane sulfonamide	NEtFOSA	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Ethyl perfluorooctane sulfonamidoethanol	NEtFOSE	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Methyl perfluorooctane sulfonamide	NMeFOSA	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Methyl perfluorooctane sulfonamidoethanol	NMeFOSE	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MeFOSAA	MeFOSAA	--	--	--	< 0.41	< 0.44	< 0.49	< 0.48	< 0.40	< 0.47	< 0.48	< 0.58	< 0.42	< 0.40	< 0.40	< 0.44	< 0.42	< 0.43
EtFOSAA	EtFOSAA	--	--	--	< 0.39	< 0.42	< 0.46	< 0.46	< 0.38	< 0.45	< 0.46	< 0.55	< 0.40	< 0.38	< 3.8	< 0.42	< 0.40	< 0.40
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic ac	F-53B Major	--	--	--	< 0.029	< 0.030	< 0.034	< 0.033	< 0.028	< 0.033	< 0.033	< 0.040	< 0.029	< 0.028	< 0.027	< 0.030	< 0.029	< 0.029
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic ac	F-53B Minor	--	--	--	< 0.023	< 0.025	< 0.028	< 0.027	< 0.023	< 0.027	< 0.027	< 0.033	< 0.024	< 0.023	< 0.022	< 0.025	< 0.024	< 0.024
Total PFAS		--	--	--	2	4	2	4	2	6	5	6	120	320	140	150	17	8

AECOM

Table 2
Soil Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Parameters		Generic RCLs			SS-18	SS-19	SS-20	SS-21	SS-22	SS-23	SS-24	SS-25	SS-26	SS-27	SS-28	SS-29	SS-30	SS-31
		Non-Industrial	Industrial	Groundwater Pathway	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 7/26/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019
PFAS (ug/kg)	**ABBR.**																	
Perfluorobutanoic acid	PFBA	--	--	--	0.59 B	3.4 B	0.14 JB	0.17 JB	0.12 JB	0.24 B	0.21 B	0.31 B	0.86 B	0.58 B	< 0.030	0.37 B	0.085 JB	0.13 JB
Perfluorobutanesulfonic acid	PFBS	1,260,000	16,400,000	--	< 0.025	< 0.028	< 0.026	< 0.027	< 0.028	< 0.026	< 0.025	< 0.027	< 0.027	< 0.026	< 0.027	< 0.026	< 0.026	< 0.025
4:2 Fluorotelomer Sulfonic Acid	4:2 FTS	--	--	--	< 0.38	< 0.41	< 0.38	< 0.39	< 0.41	< 0.39	< 0.38	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.38
Perfluoropentanoic acid	PFPeA	--	--	--	0.22	0.38	< 0.080	< 0.082	< 0.085	< 0.080	0.17 J	0.11 J	0.31	0.42	< 0.082	0.12 J	0.11 J	0.59
Perfluoropentane Sulfonic Acid	PFPeS				< 0.020	< 0.022	< 0.021	< 0.021	< 0.022	< 0.021	< 0.020	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	< 0.020
Perfluorohexanoic acid	PFHxA	--	--	--	0.26	1.0	< 0.044	< 0.045	< 0.047	0.050 J	0.083 J	0.088 J	0.28	0.50	< 0.045	0.050 J	< 0.044	0.26
Perfluorohexanesulfonoic acid	PFHxS	--	--	--	< 0.032	< 0.034	< 0.032	< 0.033	< 0.034	< 0.032	< 0.031	< 0.033	< 0.033	0.038 J	0.035 JI	0.040 J	< 0.032	< 0.032
6:2 Fluorotelomer sulfonic acid	6:2 FTS	--	--	--	11	130	< 0.16	1.5 J	0.44 J	2.0 J	3.8	1.2 J	9.8	13	1.6 J	< 0.16	0.16 J	0.66 J
Perfluoroheptanoic acid	PFHpA	--	--	--	0.031 J	0.18 J	< 0.030	< 0.031	< 0.032	< 0.030	0.032 J	< 0.031	0.070 J	0.056 J	< 0.031	0.043 J	< 0.030	0.068 J
Perfluoroheptanesulfonic acid	PFHpS	--	--	--	< 0.036	< 0.039	< 0.036	< 0.037	< 0.039	< 0.037	< 0.035	< 0.037	< 0.037	< 0.037	< 0.037	< 0.037	< 0.036	< 0.036
Perfluorooctanoic acid	PFOA	1,260	16,400	--	< 0.088	< 0.095	< 0.089	< 0.091	< 0.095	< 0.090	< 0.087	< 0.092	< 0.092	< 0.091	< 0.091	< 0.090	< 0.090	< 0.087
Ammonium Perfluorooctanoate	APFO	--	--	--	< 0.091	< 0.098	< 0.092	< 0.094	< 0.099	< 0.093	< 0.090	< 0.095	< 0.095	< 0.094	< 0.095	< 0.093	< 0.093	< 0.090
Perfluorooctanesulfonic acid	PFOS	1,260	16,400	--	< 0.20	< 0.22	< 0.21	< 0.21	< 0.22	< 0.21	< 0.20	0.24 J	< 0.21	< 0.21	< 0.21	< 0.21	0.21 J	< 0.20
8:2 Fluorotelomer sulfonic acid	8:2 FTS	--	--	--	0.62 J	< 2.8	< 0.26	< 0.27	< 0.28	< 0.26	< 0.25	< 0.27	< 0.27	< 0.26	< 0.27	< 0.26	< 0.26	< 0.25
Perfluorononaoic acid	PFNA	--	--	--	< 0.037	< 0.040	< 0.037	< 0.038	< 0.040	< 0.038	< 0.036	< 0.038	< 0.038	< 0.038	< 0.038	< 0.038	< 0.037	< 0.037
Perfluorononanesulfonic Acid	PFNS	--	--	--	< 0.020	< 0.022	< 0.021	< 0.021	< 0.022	< 0.021	< 0.020	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	< 0.020
Perfluorodecanoic acid	PFDA	--	--	--	< 0.022	0.030 J	< 0.023	< 0.023	< 0.024	< 0.023	< 0.022	0.058 J	0.042 J	< 0.023	< 0.023	0.024 J	< 0.023	< 0.022
Perfluorodecanesulfonic acid	PFDS	--	--	--	< 0.040	< 0.043	< 0.040	< 0.041	< 0.043	< 0.041	< 0.040	< 0.042	< 0.042	< 0.041	< 0.041	< 0.041	< 0.041	< 0.040
10:2 Fluorotelomer Sulfonic Acid	10:2 FTS	--	--	--	0.20	0.44	< 0.052	< 0.053	< 0.055	< 0.052	< 0.051	< 0.053	0.11 J	0.11 J	< 0.053	< 0.052	< 0.052	< 0.051
Perfluoroundecanoic acid	PFUnA	--	--	--	< 0.037	< 0.040	< 0.037	< 0.038	< 0.040	< 0.038	< 0.036	0.043 J	0.065 J	< 0.038	< 0.038	< 0.038	< 0.037	< 0.037
Perfluorododecanoic acid	PFDoA	--	--	--	< 0.068	< 0.074	< 0.070	< 0.071	< 0.074	< 0.070	< 0.068	< 0.071	< 0.071	< 0.071	< 0.071	< 0.070	< 0.070	< 0.068
Perfluorododecanesulfonic acid	PFDoS	--	--	--	< 0.061	< 0.066	< 0.062	< 0.064	< 0.066	< 0.063	< 0.061	< 0.064	< 0.064	< 0.063	< 0.064	< 0.063	< 0.062	< 0.061
Perfluorotridecanoic acid	PFTrDA	--	--	--	< 0.052	< 0.056	< 0.053	< 0.054	< 0.057	< 0.053	< 0.052	< 0.054	< 0.054	< 0.054	< 0.054	< 0.053	< 0.053	< 0.052
Perfluorotetradecanoic acid	PFTeDA	--	--	--	< 0.055	< 0.059	< 0.056	< 0.057	< 0.060	< 0.056	< 0.055	< 0.057	< 0.058	< 0.057	< 0.057	< 0.057	< 0.056	< 0.055
Perfluorohexadecanoic acid	PFHxDA	--	--	--	< 0.045	< 0.048	< 0.046	< 0.047	< 0.049	< 0.046	< 0.045	< 0.047	< 0.047	< 0.046	< 0.047	< 0.046	< 0.046	< 0.045
Perfluorooctadecanoic acid	PFODA	--	--	--	< 0.028	< 0.031	< 0.029	< 0.030	< 0.031	< 0.029	< 0.028	< 0.030	< 0.030	< 0.029	< 0.030	< 0.029	< 0.029	< 0.028
HFPO-DA	GenX	--	--	--	< 0.11	< 0.12	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.11	< 0.11
4,8-dioxa-3H-perfluorononanoic acid	DONA	--	--	--	< 0.018	< 0.020	< 0.019	< 0.019	< 0.020	< 0.019	< 0.018	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.018
NaDONA	NaDONA	--	--	--	< 0.019	< 0.021	< 0.020	< 0.020	< 0.021	< 0.020	< 0.019	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.019
ADONA	ADONA	--	--	--	< 0.019	< 0.021	< 0.020	< 0.020	< 0.021	< 0.020	< 0.019	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.019
Perfluorooctane sulfonamide	PFOSA	--	--	--	< 0.083	< 0.090	< 0.085	< 0.087	< 0.091	< 0.086	< 0.083	< 0.087	< 0.087	< 0.086	< 0.087	< 0.086	< 0.085	< 0.083
N-Ethyl perfluorooctane sulfonamide	NEtFOSA	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.025	< 0.025	< 0.024
N-Ethyl perfluorooctane sulfonamidoethanol	NEtFOSE	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.038	< 0.037	< 0.037
N-Methyl perfluorooctane sulfonamide	NMeFOSA	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.043	< 0.043	< 0.042
N-Methyl perfluorooctane sulfonamidoethanol	NMeFOSE	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.074	< 0.074	< 0.072
MeFOSAA	MeFOSAA	--	--	--	< 0.40	< 0.43	< 0.40	< 0.41	< 0.43	< 0.41	< 0.40	< 0.42	< 0.42	< 0.41	< 0.41	< 0.41	< 0.41	< 0.40
EtFOSAA	EtFOSAA	--	--	--	< 0.38	< 0.41	< 0.38	< 0.39	< 0.41	< 0.39	< 0.38	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.38
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic ac	F-53B Major	--	--	--	< 0.027	< 0.030	< 0.028	< 0.029	< 0.030	< 0.028	< 0.027	< 0.029	< 0.029	< 0.028	< 0.029	< 0.028 F1	< 0.028	< 0.027
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic ac	F-53B Minor	--	--	--	< 0.022	< 0.024	< 0.023	< 0.023	< 0.024	< 0.023	< 0.022	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.023	< 0.022
Total PFAS		--	--	--	13	140	0	2	1	2	4	2	12	15	2	1	1	2

AECOM

Table 2
Soil Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Parameters		Generic RCLs			SS-32	SS-33	SS-34	SS-34 DUP	SS-35	SS-36	SS-37	SS-38	SS-39	SS-40	SS-41	SS-42	SS-43	SS-44
		Non-Industrial	Industrial	Groundwater Pathway	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019
PFAS (ug/kg)	**ABBR.**																	
Perfluorobutanoic acid	PFBA	--	--	--	0.090 JB	0.082 JB	0.12 JB	0.11 JB	0.21 B	0.63 B	0.10 JB	0.081 JB	0.063 JB	0.092 JB	0.14 JB	0.093 JB	0.070 JB	0.79 B
Perfluorobutanesulfonic acid	PFBS	1,260,000	16,400,000	--	< 0.025	< 0.026	< 0.026	< 0.025	0.17 J	0.071 J	0.11 J	0.052 J	< 0.027	0.041 J	< 0.025	< 0.026	< 0.025	0.034 J
4:2 Fluorotelomer Sulfonic Acid	4:2 FTS	--	--	--	< 0.37	< 0.39	< 0.38	< 0.37	< 0.38	< 0.37	< 0.38	< 0.38	< 0.40	< 0.40	< 0.37	< 0.38	< 0.37	< 0.39
Perfluoropentanoic acid	PFPeA	--	--	--	0.30	0.17 J	0.15 J	0.20	0.58	2.4	0.086 J	0.090 J	< 0.083	< 0.083	0.49	0.15 J	< 0.078	1.3
Perfluoropentane Sulfonic Acid	PFPeS				< 0.020	< 0.021	< 0.021	< 0.020	0.051 J	< 0.020	0.045 J	< 0.021	< 0.022	< 0.022	< 0.020	< 0.021	< 0.020	< 0.021
Perfluorohexanoic acid	PFHxA	--	--	--	0.17 J	0.056 J	0.17 J	0.17 J	0.28	1.6	0.077 J	0.065 J	< 0.045	0.046 J	0.14 J	0.15 J	0.077 J	0.70
Perfluorohexanesulfonoic acid	PFHxS	--	--	--	< 0.031	< 0.033	< 0.032	0.031 J	0.10 J	0.035 J	0.063 J	< 0.032	< 0.033	0.036 J	< 0.031	< 0.032	0.034 J	0.040 J
6:2 Fluorotelomer sulfonic acid	6:2 FTS	--	--	--	< 0.15	< 0.16	0.83 J	1.2 J	1.7 J	2.4	1.9 J	0.32 J	0.29 J	0.48 J	0.71 J	8.9	4.4	36
Perfluoroheptanoic acid	PFHpA	--	--	--	0.030 J	< 0.031	0.057 J	0.068 J	0.14 J	0.13 J	0.043 J	0.031 JI	< 0.031	< 0.031	0.10 J	< 0.030	< 0.029	0.27
Perfluoroheptanesulfonic acid	PFHpS	--	--	--	< 0.035	< 0.037	< 0.036	< 0.035	0.057 J	< 0.035	0.043 J	< 0.036	< 0.038	< 0.038	< 0.035	< 0.036	< 0.035	< 0.037
Perfluorooctanoic acid	PFOA	1,260	16,400	--	< 0.087	< 0.091	< 0.089	< 0.087	0.095 J	< 0.087	< 0.088	< 0.088	< 0.093	< 0.093	< 0.086	< 0.089	< 0.087	< 0.091
Ammonium Perfluorooctanoate	APFO	--	--	--	< 0.090	< 0.094	< 0.092	< 0.090	0.099 J	< 0.090	< 0.091	< 0.091	< 0.096	< 0.096	< 0.089	< 0.092	< 0.090	< 0.094
Perfluorooctanesulfonic acid	PFOS	1,260	16,400	--	< 0.20	< 0.21	< 0.21	< 0.20	< 0.21	< 0.20	< 0.20	< 0.21	< 0.22	< 0.22	< 0.20	< 0.21	< 0.20	< 0.21
8:2 Fluorotelomer sulfonic acid	8:2 FTS	--	--	--	< 0.25	< 0.26	< 0.26	< 0.25	0.29 J	< 0.25	0.48 J	< 0.26	< 0.27	< 0.27	< 0.25	0.35 J	< 0.25	< 0.26
Perfluorononaoic acid	PFNA	--	--	--	< 0.036	< 0.038	< 0.037	0.039 J	0.089 J	0.043 J	0.043 J	< 0.037	0.040 J	< 0.039	0.077 J	< 0.037	0.036 JI	0.047 J
Perfluorononanesulfonic Acid	PFNS	--	--	--	< 0.020	< 0.021	< 0.021	< 0.020	0.068 JI	0.025 J	0.039 JI	< 0.021	< 0.022	< 0.022	< 0.020	< 0.021	< 0.020	< 0.021
Perfluorodecanoic acid	PFDA	--	--	--	< 0.022	0.035 J	< 0.023	0.046 JI	0.070 J	< 0.022	0.057 J	< 0.023	0.075 J	0.16 J	0.026 JI	< 0.023	0.054 JI	0.052 J
Perfluorodecanesulfonic acid	PFDS	--	--	--	< 0.039	< 0.041	< 0.040	< 0.039	0.057 J	< 0.039	0.041 J	< 0.040	< 0.042	< 0.042	< 0.039	< 0.040	< 0.039	< 0.041
10:2 Fluorotelomer Sulfonic Acid	10:2 FTS	--	--	--	< 0.051	< 0.053	< 0.052	0.068 J	0.078 J	< 0.050	0.086 J	< 0.051	< 0.054	< 0.054	< 0.050	0.10 J	< 0.051	< 0.053
Perfluoroundecanoic acid	PFUnA	--	--	--	< 0.036	0.060 J	< 0.037	0.045 J	0.084 J	0.044 J	0.054 J	< 0.037	0.045 J	0.10 J	< 0.036	0.044 JI	< 0.036	< 0.038
Perfluorododecanoic acid	PFDoA	--	--	--	< 0.068	< 0.071	< 0.069	< 0.068	< 0.069	< 0.068	< 0.069	< 0.069	< 0.072	0.17 J	< 0.067	< 0.069	< 0.068	< 0.071
Perfluorododecanesulfonic acid	PFDoS	--	--	--	< 0.061	< 0.063	< 0.062	< 0.061	< 0.062	< 0.061	< 0.061	< 0.062	< 0.065	< 0.065	< 0.060	< 0.062	< 0.061	< 0.064
Perfluorotridecanoic acid	PFTrDA	--	--	--	< 0.052	< 0.054	< 0.053	< 0.052	0.068 J	< 0.052	< 0.052	< 0.052	< 0.055	0.065 J	< 0.051	< 0.053	< 0.052	< 0.054
Perfluorotetradecanoic acid	PFTeDA	--	--	--	< 0.055	< 0.057	< 0.056	< 0.055	0.068 J	< 0.055	< 0.055	< 0.055	< 0.058	0.091 J	< 0.054	< 0.056	< 0.055	< 0.057
Perfluorohexadecanoic acid	PFHxDA	--	--	--	< 0.045	< 0.046	< 0.046	< 0.044	0.069 J	< 0.044	< 0.045	< 0.045	< 0.047	< 0.048	< 0.044	< 0.045	< 0.045	< 0.047
Perfluorooctadecanoic acid	PFODA	--	--	--	< 0.028	< 0.030	< 0.029	< 0.028	0.079 J	< 0.028	0.055 J	< 0.029	< 0.030	< 0.030	< 0.028	< 0.029	< 0.028	< 0.030
HFPO-DA	GenX	--	--	--	< 0.11	< 0.12	< 0.11	< 0.11	3.3	1.0	2.2	0.48	0.46	0.60	0.19 J	0.26	0.19 J	0.19 J
4,8-dioxa-3H-perfluorononanoic acid	DONA	--	--	--	< 0.018	< 0.019	< 0.019	< 0.018	0.046 J	< 0.018	0.026 J	< 0.018	< 0.019	< 0.019	< 0.018	< 0.019	< 0.018	< 0.019
NaDONA	NaDONA	--	--	--	< 0.019	< 0.020	< 0.020	< 0.019	0.049 J	< 0.019	0.028 J	< 0.019	< 0.021	< 0.021	< 0.019	< 0.020	< 0.019	< 0.020
ADONA	ADONA	--	--	--	< 0.019	< 0.020	< 0.020	< 0.019	0.048 J	< 0.019	0.028 J	< 0.019	< 0.021	< 0.021	< 0.019	< 0.020	< 0.019	< 0.020
Perfluorooctane sulfonamide	PFOSA	--	--	--	< 0.083	< 0.087	< 0.085	< 0.083	< 0.085	< 0.083	< 0.084	< 0.084	< 0.089	< 0.089	< 0.082	< 0.084	< 0.083	< 0.087
N-Ethyl perfluorooctane sulfonamide	NEtFOSA	--	--	--	< 0.024	< 0.025	< 0.025	0.056 J	< 0.025	< 0.024	< 0.025	< 0.025	< 0.026	< 0.026	< 0.024	< 0.025	< 0.024	< 0.025
N-Ethyl perfluorooctane sulfonamidoethanol	NEtFOSE	--	--	--	< 0.036	< 0.038	0.048 J	0.098 J	0.089 J	< 0.036	< 0.037	0.048 J	< 0.039	< 0.039	0.046 J	< 0.037	< 0.036	< 0.038
N-Methyl perfluorooctane sulfonamide	NMeFOSA	--	--	--	< 0.041	< 0.043	< 0.042	0.069 J	< 0.042	< 0.041	< 0.042	< 0.042	< 0.044	< 0.044	< 0.041	< 0.042	< 0.042	< 0.043
N-Methyl perfluorooctane sulfonamidoethanol	NMeFOSE	--	--	--	< 0.072	< 0.075	< 0.074	0.12 J	< 0.074	< 0.072	< 0.073	< 0.073	< 0.077	< 0.077	< 0.071	< 0.073	< 0.072	< 0.075
MeFOSAA	MeFOSAA	--	--	--	< 0.39	< 0.41	< 0.40	< 0.39	< 0.40	< 0.39	< 0.40	< 0.40	< 0.42	< 0.42	< 0.39	< 0.40	< 0.39	< 0.41
EtFOSAA	EtFOSAA	--	--	--	< 0.37	< 0.39	< 0.38	< 0.37	< 0.38	< 0.37	< 0.38	< 0.38	< 0.40	< 0.40	< 0.37	< 0.38	< 0.37	< 0.39
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic ac	F-53B Major	--	--	--	< 0.027	< 0.029	< 0.028	< 0.027	0.069 J	< 0.027	0.038 J	< 0.028	< 0.029	< 0.029	< 0.027	< 0.028	< 0.027	< 0.029
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic ac	F-53B Minor	--	--	--	< 0.022	< 0.023	< 0.023	< 0.022	0.049 J	< 0.022	0.032 J	< 0.023	< 0.024	< 0.024	< 0.022	< 0.023	< 0.022	< 0.023
Total PFAS		--	--	--	1	0	1	2	8	8	6	1	1	2	2	10	5	39

AECOM

Table 2
Soil Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Parameters		Generic RCLs			SS-45	SS-46	SS-46 DUP	SS-47	SS-48	SS-49	SS-49 DUP	SS-50	SS-51	SS-52	SS-53	SS-54	SS-55	MW-1
		Non-Industrial	Industrial	Groundwater Pathway	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 10/29/2019	Surface 4/7/2020
PFAS (ug/kg)	**ABBR.**																	
Perfluorobutanoic acid	PFBA	--	--	--	0.30 B	0.058 JB	0.056 JB	0.12 JB	0.057 JB	0.12 JB	0.13 JB	0.075 JB	0.066 JB	0.11 JB	0.067 JB	0.23 B	0.20 B	0.090 JB
Perfluorobutanesulfonic acid	PFBS	1,260,000	16,400,000	--	< 0.025	< 0.026	< 0.028	< 0.026	< 0.025	< 0.028	< 0.026	< 0.025	< 0.026	< 0.027	< 0.025	< 0.027	< 0.025	< 0.028
4:2 Fluorotelomer Sulfonic Acid	4:2 FTS	--	--	--	< 0.37	< 0.39	< 0.41	< 0.38	< 0.37	< 0.42	< 0.38	< 0.37	< 0.38	< 0.40	< 0.37	< 0.40	< 0.37	< 0.41
Perfluoropentanoic acid	PFPeA	--	--	--	0.093 J	0.13 J	0.098 J	0.12 J	< 0.077	< 0.087	< 0.080	< 0.077	< 0.080	< 0.083	< 0.077	0.43	0.40	< 0.085
Perfluoropentane Sulfonic Acid	PFPeS				< 0.020	< 0.021	< 0.022	< 0.021	< 0.020	< 0.023	< 0.021	< 0.020	< 0.021	< 0.022	< 0.020	< 0.022	< 0.020	< 0.022
Perfluorohexanoic acid	PFHxA	--	--	--	0.21	0.078 J	< 0.047	0.12 J	< 0.042	< 0.048	< 0.043	< 0.042	< 0.044	< 0.045	< 0.042	0.20 J	0.21	< 0.046
Perfluorohexanesulfonoic acid	PFHxS	--	--	--	0.034 J	< 0.032	< 0.035	< 0.032	< 0.031	< 0.035	< 0.032	< 0.031	< 0.032	< 0.033	< 0.031	< 0.033	< 0.031	0.15 J
6:2 Fluorotelomer sulfonic acid	6:2 FTS	--	--	--	33	2.4	1.5 J	5.0	< 0.15	< 0.17	< 0.16	< 0.15	1.3 J	0.20 J	0.30 J	7.6	2.7	< 0.17
Perfluoroheptanoic acid	PFHpA	--	--	--	< 0.029	< 0.030	< 0.032	< 0.030	< 0.029	< 0.033	< 0.030	< 0.029	< 0.030	< 0.031	< 0.029	0.092 J	0.061 J	< 0.032
Perfluoroheptanesulfonic acid	PFHpS	--	--	--	< 0.035	< 0.037	< 0.039	< 0.036	< 0.035	< 0.040	< 0.036	< 0.035	< 0.036	< 0.038	< 0.035	< 0.038	< 0.035	< 0.039
Perfluorooctanoic acid	PFOA	1,260	16,400	--	< 0.087	< 0.090	< 0.096	< 0.089	< 0.086	< 0.098	< 0.089	< 0.087	< 0.089	< 0.093	< 0.086	< 0.093	< 0.087	0.11 J
Ammonium Perfluorooctanoate	APFO	--	--	--	< 0.090	< 0.093	< 0.10	< 0.092	< 0.090	< 0.10	< 0.092	< 0.090	< 0.092	< 0.096	< 0.089	< 0.096	< 0.090	0.12 J
Perfluorooctanesulfonic acid	PFOS	1,260	16,400	--	< 0.20	< 0.21	< 0.22	< 0.20 H	< 0.20	< 0.23	< 0.21	0.20 JB*	< 0.21	< 0.22	< 0.20	0.47 JB*	< 0.20	2.4 B
8:2 Fluorotelomer sulfonic acid	8:2 FTS	--	--	--	0.36 J	< 0.26	< 0.28	< 0.26	< 0.25	< 0.28	< 0.26	< 0.25	< 0.26	< 0.27	< 0.25	< 0.27	< 0.25	< 0.28
Perfluorononaoic acid	PFNA	--	--	--	< 0.036	< 0.038	< 0.040	< 0.037	< 0.036	0.047 J	0.067 J	< 0.036	< 0.037	< 0.039	< 0.036	< 0.039	< 0.036	0.063 J
Perfluorononanesulfonic Acid	PFNS	--	--	--	< 0.020	< 0.021	< 0.022	< 0.021	< 0.020	< 0.023	< 0.021	< 0.020	< 0.021	< 0.022	< 0.020	< 0.022	< 0.020	< 0.022
Perfluorodecanoic acid	PFDA	--	--	--	< 0.022	< 0.023	< 0.025	< 0.023	< 0.022	< 0.025	0.087 J	0.043 JI	0.079 J	0.065 J	< 0.022	0.043 J	< 0.022	0.33
Perfluorodecanesulfonic acid	PFDS	--	--	--	< 0.039	< 0.041	< 0.044	< 0.040	< 0.039	< 0.044	< 0.040	< 0.039	< 0.040	< 0.042	< 0.039	< 0.042	< 0.039	0.47
10:2 Fluorotelomer Sulfonic Acid	10:2 FTS	--	--	--	0.20	< 0.052	< 0.056	< 0.052	< 0.050	< 0.057	< 0.052	< 0.050	< 0.052	< 0.054	< 0.050	0.055 J	< 0.051	< 0.055
Perfluoroundecanoic acid	PFUnA	--	--	--	< 0.036	< 0.038	< 0.040	< 0.037	< 0.036	< 0.041	< 0.037	0.037 J	< 0.037	0.064 J	< 0.036	0.051 JI	< 0.036	0.069 J
Perfluorododecanoic acid	PFDoA	--	--	--	< 0.068	< 0.070	< 0.075	< 0.069	< 0.067	< 0.076	< 0.069	< 0.067	< 0.069	< 0.072	< 0.067	< 0.072	< 0.068	0.18 J
Perfluorododecanesulfonic acid	PFDoS	--	--	--	< 0.061	< 0.063	< 0.067	< 0.062	< 0.060	< 0.068	< 0.062	< 0.060	< 0.062	< 0.065	< 0.060	< 0.065	< 0.061	< 0.066
Perfluorotridecanoic acid	PFTrDA	--	--	--	< 0.052	< 0.053	< 0.057	< 0.053	< 0.051	< 0.058	< 0.053	< 0.051	< 0.053	< 0.055	< 0.051	< 0.055	< 0.052	< 0.056
Perfluorotetradecanoic acid	PFTeDA	--	--	--	< 0.055	< 0.057	< 0.060	< 0.056	< 0.054	< 0.061	< 0.056	< 0.054	< 0.056	< 0.058	< 0.054	< 0.058	< 0.055	0.067 J
Perfluorohexadecanoic acid	PFHxDA	--	--	--	< 0.045	< 0.046	< 0.049	< 0.045	< 0.044	< 0.050	< 0.046	< 0.044	< 0.046	< 0.047	< 0.044	< 0.047	< 0.045	< 0.049
Perfluorooctadecanoic acid	PFODA	--	--	--	< 0.028	< 0.029	< 0.031	< 0.029	< 0.028	< 0.032	< 0.029	< 0.028	< 0.029	< 0.030	< 0.028	< 0.030	< 0.028	< 0.031
HFPO-DA	GenX	--	--	--	0.19 J	< 0.12	< 0.12	< 0.11	< 0.11	< 0.12	< 0.11	< 0.11	< 0.11	< 0.12	< 0.11	< 0.12	< 0.11	< 0.12
4,8-dioxa-3H-perfluorononanoic acid	DONA	--	--	--	< 0.018	< 0.019	< 0.020	< 0.019	< 0.018	< 0.020	< 0.019	< 0.018	< 0.019	< 0.019	< 0.018	< 0.019	< 0.018	< 0.020
NaDONA	NaDONA	--	--	--	< 0.019	< 0.020	< 0.021	< 0.020	< 0.019	< 0.022	< 0.020	< 0.019	< 0.020	< 0.020	< 0.019	< 0.020	< 0.019	< 0.021
ADONA	ADONA	--	--	--	< 0.019	< 0.020	< 0.021	< 0.020	< 0.019	< 0.022	< 0.020	< 0.019	< 0.020	< 0.020	< 0.019	< 0.020	< 0.019	< 0.021
Perfluorooctane sulfonamide	PFOSA	--	--	--	< 0.083	< 0.086	< 0.092	< 0.085	< 0.082	< 0.093	< 0.085	< 0.083	< 0.085	< 0.088	< 0.082	< 0.088	< 0.083	< 0.091
N-Ethyl perfluorooctane sulfonamide	NEtFOSA	--	--	--	< 0.024	< 0.025	< 0.027	< 0.025	< 0.024	< 0.027	< 0.025	< 0.024	< 0.025	< 0.026	< 0.024	< 0.026	< 0.024	< 0.027
N-Ethyl perfluorooctane sulfonamidoethanol	NEtFOSE	--	--	--	< 0.036	< 0.038	< 0.040	0.051 JH	< 0.036	< 0.041	< 0.037	0.078 JB	< 0.037	< 0.039	< 0.036	< 0.039	< 0.036	0.36
N-Methyl perfluorooctane sulfonamide	NMeFOSA	--	--	--	< 0.041	< 0.043	< 0.046	< 0.042	< 0.041	< 0.046	< 0.042	< 0.041	< 0.042	< 0.044	< 0.041	< 0.044	< 0.041	< 0.045
N-Methyl perfluorooctane sulfonamidoethanol	NMeFOSE	--	--	--	< 0.072	< 0.074	< 0.079	< 0.072 HF2	< 0.071	< 0.081	< 0.073	0.076 J	< 0.074	< 0.077	< 0.071	0.10 J	< 0.072	0.81
MeFOSAA	MeFOSAA	--	--	--	< 0.39	< 0.41	< 0.44	< 0.40	< 0.39	< 0.44	< 0.40	< 0.39	< 0.40	< 0.42	< 0.39	< 0.42	< 0.39	< 0.43
EtFOSAA	EtFOSAA	--	--	--	< 0.37	< 0.39	< 0.41	< 0.38	< 0.37	< 0.42	< 0.38	< 0.37	< 0.38	< 0.40	< 0.37	< 0.40	< 0.37	< 0.41
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic ac	F-53B Major	--	--	--	< 0.027	< 0.028	< 0.030	< 0.028	< 0.027	< 0.031	< 0.028	< 0.027	< 0.028	< 0.029	< 0.027	< 0.029	< 0.027	< 0.030
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic ac	F-53B Minor	--	--	--	< 0.022	< 0.023	< 0.025	< 0.023	< 0.022	< 0.025	< 0.023	< 0.022	< 0.023	< 0.024	< 0.022	< 0.024	< 0.022	< 0.024
Total PFAS		--	--	--	34	3	2	5	0	0	0	1	1	0	0	9	4	5.2

AECOM

Table 2
Soil Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Parameters		Generic RCLs			SS-56	SS-57	SS-58	SS-59	SS-60	SS-61	SS-62	SS-63	SS-64	SS-65	SS-66	SS-67	SS-68	SS-69
		Non-Industrial	Industrial	Groundwater Pathway	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020
PFAS (ug/kg)	**ABBR.**																	
Perfluorobutanoic acid	PFBA	--	--	--	< 0.028	0.11 JB	< 0.028	0.081 JB	0.15 JB	0.20 JB	0.11 JB	0.073 JB	0.098 JB	0.11 JB	0.18 JB	0.16 JB	0.092 JB	0.11 JB
Perfluorobutanesulfonic acid	PFBS	1,260,000	16,400,000	--	< 0.025	< 0.026	< 0.025	< 0.024	< 0.026	< 0.026	0.035 J	< 0.030	< 0.028	0.044 J	0.047 J	0.056 J	0.043 J	0.028 J
4:2 Fluorotelomer Sulfonic Acid	4:2 FTS	--	--	--	< 0.36	< 0.38	< 0.38	< 0.35	< 0.39	< 0.38	< 0.41	< 0.44	< 0.41	< 0.43	< 0.42	< 0.41	< 0.44	< 0.42
Perfluoropentanoic acid	PFPeA	--	--	--	< 0.076	0.15 J	0.094 J	0.076 J	< 0.080	< 0.080	0.24	< 0.092	< 0.086	0.12 J	0.10 J	0.23	0.13 J	0.39
Perfluoropentane Sulfonic Acid	PFPeS				< 0.020	< 0.020	< 0.020	< 0.019	< 0.021	< 0.021	< 0.022	< 0.024	< 0.022	< 0.024	< 0.022	< 0.022	< 0.024	< 0.023
Perfluorohexanoic acid	PFHxA	--	--	--	< 0.041	0.080 J	0.058 JI	< 0.040	< 0.044	< 0.043	0.11 J	< 0.050	< 0.047	0.054 JI	0.11 J	0.23	< 0.050	0.51
Perfluorohexanesulfonoic acid	PFHxS	--	--	--	< 0.030	< 0.032	< 0.032	0.032 J	< 0.032	< 0.032	0.30	0.33	0.17 J	< 0.036	0.057 J	0.085 J	0.038 JI	0.37
6:2 Fluorotelomer sulfonic acid	6:2 FTS	--	--	--	< 0.15	1.2 J	< 0.15	< 0.14	< 0.16	< 0.16	< 0.17	< 0.18	< 0.17	< 0.18	< 0.17	< 0.17	< 0.18	1.3 J
Perfluoroheptanoic acid	PFHpA	--	--	--	< 0.029	< 0.030	< 0.029	< 0.028	< 0.030	< 0.030	0.053 J	0.035 J	0.049 J	0.040 J	0.082 J	0.15 J	0.055 J	0.21 J
Perfluoroheptanesulfonic acid	PFHpS	--	--	--	< 0.034	< 0.036	< 0.036	< 0.034	< 0.036	< 0.036	< 0.039	< 0.042	< 0.039	< 0.041	< 0.039	< 0.039	< 0.042	< 0.039
Perfluorooctanoic acid	PFOA	1,260	16,400	--	< 0.085	< 0.088	< 0.087	< 0.082	< 0.090	< 0.089	0.19 J	0.24	0.23	< 0.10	0.24	0.56	0.11 J	0.15 J
Ammonium Perfluorooctanoate	APFO	--	--	--	< 0.088	< 0.091	< 0.090	< 0.085	< 0.093	< 0.092	0.20 J	0.25	0.24	0.10 J	0.25	0.58	0.11 J	0.15 J
Perfluorooctanesulfonic acid	PFOS	1,260	16,400	--	< 0.20	0.21 JB	< 0.20	0.28 JB	0.22 JB	< 0.21	5.8 B	6.4 B	4.5 B	0.71 B	1.3 B	2.6 B	0.87 B	5.9 B
8:2 Fluorotelomer sulfonic acid	8:2 FTS	--	--	--	< 0.25	< 0.26	< 0.25	< 0.24	< 0.26	< 0.26	< 0.28	< 0.30	< 0.28	< 0.29	< 0.28	< 0.28	< 0.30	< 0.28
Perfluorononaoic acid	PFNA	--	--	--	< 0.035	< 0.037	< 0.037	< 0.034	< 0.037	< 0.037	0.14 J	0.14 J	0.13 J	0.051 J	0.095 J	0.20 J	0.057 J	0.11 J
Perfluorononanesulfonic Acid	PFNS	--	--	--	< 0.020	< 0.020	< 0.020	< 0.019	< 0.021	< 0.021	< 0.022	< 0.024	< 0.022	< 0.024	< 0.022	< 0.022	< 0.024	< 0.023
Perfluorodecanoic acid	PFDA	--	--	--	< 0.022	0.032 J	0.031 JI	< 0.021	0.040 JI	< 0.023	0.70	0.67	0.59	0.093 J	0.31	0.57	0.093 J	0.81
Perfluorodecanesulfonic acid	PFDS	--	--	--	< 0.038	< 0.040	< 0.040	< 0.037	< 0.041	< 0.040	0.86	0.82	0.41	< 0.046	0.058 J	0.060 J	0.047 J	1.0
10:2 Fluorotelomer Sulfonic Acid	10:2 FTS	--	--	--	< 0.049	0.080 J	< 0.051	< 0.048	< 0.052	< 0.052	< 0.055	< 0.060	< 0.056	< 0.059	< 0.056	< 0.056	< 0.060	< 0.056
Perfluoroundecanoic acid	PFUnA	--	--	--	< 0.035	< 0.037	< 0.037	< 0.034	< 0.037	< 0.037	0.12 J	0.14 J	0.091 J	< 0.042	0.070 J	0.11 J	0.071 J	0.21 J
Perfluorododecanoic acid	PFDoA	--	--	--	< 0.066	< 0.069	< 0.068	< 0.064	< 0.070	< 0.069	0.31	0.34	0.19 J	< 0.079	0.16 J	0.27	< 0.080	0.47
Perfluorododecanesulfonic acid	PFDoS	--	--	--	< 0.059	< 0.061	< 0.061	< 0.057	< 0.062	< 0.062	< 0.066	< 0.072	< 0.067	< 0.071	< 0.067	< 0.067	< 0.072	< 0.068
Perfluorotridecanoic acid	PFTrDA	--	--	--	< 0.050	< 0.052	< 0.052	< 0.049	< 0.053	< 0.053	< 0.056	< 0.061	< 0.057	< 0.060	< 0.057	< 0.057	< 0.061	< 0.057
Perfluorotetradecanoic acid	PFTeDA	--	--	--	< 0.053	< 0.055	< 0.055	< 0.052	< 0.056	< 0.056	0.10 J	0.13 JI	0.061 J	< 0.063	0.078 JI	0.093 J	< 0.065	0.13 J
Perfluorohexadecanoic acid	PFHxDA	--	--	--	< 0.043	< 0.045	< 0.045	< 0.042	< 0.046	< 0.046	< 0.049	< 0.053	< 0.049	< 0.052	< 0.049	< 0.049	< 0.053	< 0.050
Perfluorooctadecanoic acid	PFODA	--	--	--	< 0.028	< 0.029	< 0.028	< 0.027	< 0.029	< 0.029	< 0.031	< 0.033	< 0.031	< 0.033	< 0.031	< 0.031	< 0.034	< 0.032
HFPO-DA	GenX	--	--	--	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.16 J	< 0.13	< 0.12	< 0.13	< 0.12	< 0.12	< 0.13	< 0.12
4,8-dioxa-3H-perfluorononanoic acid	DONA	--	--	--	< 0.018	< 0.018	< 0.018	< 0.017	< 0.019	< 0.019	< 0.020	< 0.022	< 0.020	< 0.021	< 0.020	< 0.020	< 0.022	< 0.020
NaDONA	NaDONA	--	--	--	< 0.019	< 0.019	< 0.019	< 0.018	< 0.020	< 0.020	< 0.021	< 0.023	< 0.021	< 0.022	< 0.021	< 0.021	< 0.023	< 0.021
ADONA	ADONA	--	--	--	< 0.019	< 0.019	< 0.019	< 0.018	< 0.020	< 0.020	< 0.021	< 0.023	< 0.021	< 0.022	< 0.021	< 0.021	< 0.023	< 0.021
Perfluorooctane sulfonamide	PFOSA	--	--	--	< 0.081	< 0.084	< 0.083	< 0.079	< 0.085	< 0.085	< 0.091	< 0.098	< 0.091	< 0.096	< 0.092	< 0.092	< 0.098	< 0.092
N-Ethyl perfluorooctane sulfonamide	NEtFOSA	--	--	--	< 0.024	< 0.025	< 0.024	< 0.023	< 0.025	< 0.025	< 0.027	< 0.029	< 0.027	< 0.028	< 0.027	< 0.027	< 0.029	< 0.027
N-Ethyl perfluorooctane sulfonamidoethanol	NEtFOSE	--	--	--	0.057 J	0.18 J	< 0.037	< 0.034	0.15 J	< 0.037	1.2	1.3	0.64	0.083 J	0.32	0.35	0.23 J	1.2
N-Methyl perfluorooctane sulfonamide	NMeFOSA	--	--	--	< 0.040	< 0.042	< 0.042	< 0.039	< 0.043	< 0.042	< 0.045	< 0.049	< 0.046	< 0.048	< 0.046	< 0.046	< 0.049	< 0.046
N-Methyl perfluorooctane sulfonamidoethanol	NMeFOSE	--	--	--	< 0.070	< 0.073	< 0.072	< 0.068	< 0.074	< 0.073	1.6	1.8	0.79	< 0.083	< 0.080	< 0.080	< 0.085	2.0
MeFOSAA	MeFOSAA	--	--	--	< 0.38	< 0.40	< 0.40	< 0.37	< 0.41	< 0.40	< 0.43	< 0.47	< 0.44	< 0.46	< 0.44	< 0.44	< 0.47	0.50 J
EtFOSAA	EtFOSAA	--	--	--	< 0.36	< 0.38	< 0.38	< 0.35	< 0.39	< 0.38	< 0.41	< 0.44	< 0.41	< 0.43	< 0.42	< 0.41	< 0.44	< 0.42
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic ac	F-53B Major	--	--	--	< 0.027	< 0.028	< 0.027	< 0.026	< 0.028	< 0.028	< 0.030	< 0.032	< 0.030	< 0.032	< 0.030	< 0.030	< 0.032	< 0.030
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic ac	F-53B Minor	--	--	--	< 0.022	< 0.023	< 0.022	< 0.021	< 0.023	< 0.023	< 0.024	< 0.026	< 0.025	< 0.026	< 0.025	< 0.025	< 0.026	< 0.025
Total PFAS		--	--	--	0	2	0	0	1	0	12	13	8	1	4	6	2	16

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Table 2
Soil Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Parameters		Generic RCLs			SS-70	SS-71	SS-72	SS-73	SS-74	SS-75	SS-76	SS-77	SS-78	SS-79	SS-80	SS-81	SS-82
		Non-Industrial	Industrial	Groundwater Pathway	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 4/7/2020	Surface 7/9/2020	Surface 7/9/2020	Surface 7/9/2020	Surface 7/10/2020
PFAS (ug/kg)	**ABBR.**																
Perfluorobutanoic acid	PFBA	--	--	--	0.19 JB	0.069 JB	0.076 JB	0.051 JB	< 0.36	0.28 B	0.12 JB	< 0.034	< 0.034	0.67 B	0.21 B	0.27 B	0.27 B
Perfluorobutanesulfonic acid	PFBS	1,260,000	16,400,000	--	0.035 J	0.029 J	0.035 J	< 0.028	< 0.32	0.075 J	0.21 J	< 0.031	0.038 J	< 0.026	< 0.025	< 0.025	< 0.027
4:2 Fluorotelomer Sulfonic Acid	4:2 FTS	--	--	--	< 0.42	< 0.42	< 0.41	< 0.42	< 4.8	< 0.46	< 0.49	< 0.45	< 0.46	< 0.39	< 0.38	< 0.37	< 0.40
Perfluoropentanoic acid	PFPeA	--	--	--	< 0.088	0.12 J	0.16 J	< 0.087	< 0.99	0.30	0.14 J	< 0.094	< 0.095	1.5	0.090 J	0.37	< 0.084
Perfluoropentane Sulfonic Acid	PFPeS				< 0.023	< 0.023	< 0.022	< 0.023	< 0.26	< 0.025	< 0.026	< 0.024	< 0.025	< 0.021	< 0.020	< 0.020	< 0.022
Perfluorohexanoic acid	PFHxA	--	--	--	0.11 JI	0.069 J	0.13 J	< 0.047	< 0.54	0.29	0.17 J	0.067 J	0.056 J	0.61	0.046 J	0.17 J	< 0.046
Perfluorohexanesulfonoic acid	PFHxS	--	--	--	0.067 J	0.23	0.41	0.24	< 0.40	0.053 J	0.060 J	0.051 J	0.054 J	< 0.032	< 0.032	< 0.031	< 0.034
6:2 Fluorotelomer sulfonic acid	6:2 FTS	--	--	--	< 0.17	< 0.17	< 0.17	< 0.17	< 1.9	< 0.19	< 0.20	< 0.18	< 0.18	13	< 0.15	1.3 J	3.6
Perfluoroheptanoic acid	PFHpA	--	--	--	0.15 J	0.075 J	0.32	< 0.033	< 0.37	0.18 J	0.076 J	0.050 J	< 0.036	0.26	< 0.030	0.039 J	< 0.032
Perfluoroheptanesulfonic acid	PFHpS	--	--	--	< 0.040	< 0.040	< 0.039	< 0.039	< 0.45	< 0.044	< 0.046	< 0.043	< 0.043	< 0.037	< 0.036	< 0.035	< 0.038
Perfluorooctanoic acid	PFOA	1,260	16,400	--	0.32	0.17 J	0.39	< 0.097	< 1.1	0.52	0.19 J	0.18 J	0.11 J	< 0.090	< 0.088	< 0.086	< 0.094
Ammonium Perfluorooctanoate	APFO	--	--	--	0.33	0.18 J	0.41	< 0.10	< 1.1	0.54	0.20 J	0.19 J	0.11 J	< 0.093	< 0.091	< 0.089	< 0.097
Perfluorooctanesulfonic acid	PFOS	1,260	16,400	--	1.7 B	6.1 B	7.8 B	4.5 B	4.0 JB	1.2	1.1	0.82	0.89	0.30 JB	< 0.20	< 0.20	< 0.22
8:2 Fluorotelomer sulfonic acid	8:2 FTS	--	--	--	< 0.28	< 0.28	< 0.28	< 0.28	< 3.2	< 0.31	< 0.33	< 0.31	< 0.31	< 0.26	< 0.25	< 0.25	< 0.27
Perfluorononaoic acid	PFNA	--	--	--	0.15 J	0.19 J	0.22	0.081 J	< 0.46	0.23 J	0.090 J	0.098 J	0.057 J	< 0.038	< 0.037	< 0.036	< 0.039
Perfluorononanesulfonic Acid	PFNS	--	--	--	< 0.023	< 0.023	< 0.022	< 0.023	< 0.26	< 0.025	< 0.026	< 0.024	< 0.025	< 0.021	< 0.020	< 0.020	< 0.022
Perfluorodecanoic acid	PFDA	--	--	--	0.93	0.93	1.0	0.84	1.3 J	0.72	0.18 J	0.20 J	0.15 JI	< 0.023	< 0.022	< 0.022	< 0.024
Perfluorodecanesulfonic acid	PFDS	--	--	--	0.17 J	0.88	1.1	0.78	< 0.50	0.13 J	< 0.051	< 0.048	< 0.048	< 0.041	< 0.040	< 0.039	< 0.043
10:2 Fluorotelomer Sulfonic Acid	10:2 FTS	--	--	--	< 0.057	< 0.057	< 0.056	< 0.056	< 0.64	< 0.063	< 0.066	< 0.061	< 0.062 F1	< 0.052	< 0.051	< 0.050	< 0.055
Perfluoroundecanoic acid	PFUnA	--	--	--	0.28	0.16 J	0.18 J	0.15 J	< 0.46	0.27	< 0.047	< 0.044	< 0.044	< 0.038	< 0.037	< 0.036	< 0.039
Perfluorododecanoic acid	PFDoA	--	--	--	0.75	0.40	0.42	0.33	< 0.86	0.47	< 0.088	< 0.082	< 0.083	< 0.070	< 0.068	< 0.067	< 0.073
Perfluorododecanesulfonic acid	PFDoS	--	--	--	< 0.068	< 0.068	< 0.067	< 0.068	< 0.77	< 0.075	< 0.079	< 0.073	< 0.074 F1	< 0.063	< 0.061	< 0.060	< 0.066
Perfluorotridecanoic acid	PFTrDA	--	--	--	0.058 J	< 0.058	0.063 J	< 0.057	< 0.66	0.070 J	< 0.067	< 0.062	< 0.063	< 0.053	< 0.052	< 0.051	< 0.056
Perfluorotetradecanoic acid	PFTeDA	--	--	--	0.20 J	0.13 J	0.13 J	0.097 JI	< 0.70	0.19 J	< 0.071	< 0.066	< 0.067	< 0.056	< 0.055	< 0.054	< 0.059
Perfluorohexadecanoic acid	PFHxDA	--	--	--	0.071 J	< 0.050	< 0.049	< 0.050	< 0.57	0.060 J	< 0.058	< 0.054	< 0.054	< 0.046	< 0.045	< 0.044	< 0.048
Perfluorooctadecanoic acid	PFODA	--	--	--	< 0.032	< 0.032	< 0.031	< 0.032	< 0.36	< 0.035	< 0.037	< 0.034	< 0.034	< 0.029	< 0.029	< 0.028	< 0.031
HFPO-DA	GenX	--	--	--	< 0.13	< 0.12	< 0.12	< 0.12	< 1.4	< 0.14	< 0.14	< 0.13	< 0.14	< 0.11	< 0.11	< 0.11	< 0.12
4,8-dioxa-3H-perfluorononanoic acid	DONA	--	--	--	< 0.021	< 0.020	< 0.020	< 0.020	< 0.23	< 0.023	< 0.024	< 0.022	< 0.022 F1	< 0.019	< 0.018	< 0.018	< 0.020
NaDONA	NaDONA	--	--	--	< 0.022	< 0.022	< 0.021	< 0.021	< 0.24	< 0.024	< 0.025	< 0.023	< 0.023 F1	< 0.020	< 0.019	< 0.019	< 0.021
ADONA	ADONA	--	--	--	< 0.022	< 0.022	< 0.021	< 0.021	< 0.24	< 0.024	< 0.025	< 0.023	< 0.023 F1	< 0.020	< 0.019	< 0.019	< 0.021
Perfluorooctane sulfonamide	PFOSA	--	--	--	< 0.093	< 0.093	< 0.091	< 0.092	< 1.1	< 0.10	< 0.11	< 0.10	< 0.10	< 0.086	< 0.084	< 0.082	< 0.090
N-Ethyl perfluorooctane sulfonamide	NEtFOSA	--	--	--	< 0.027	< 0.027	< 0.027	< 0.027	< 0.31	< 0.030	< 0.032	< 0.029	< 0.030	< 0.025	< 0.024	< 0.024	< 0.026
N-Ethyl perfluorooctane sulfonamidoethanol	NEtFOSE	--	--	--	0.57	1.1	1.2	0.92	0.95 J	0.34	0.15 J	< 0.044	0.20 J	0.048 J	< 0.037	< 0.036	< 0.039
N-Methyl perfluorooctane sulfonamide	NMeFOSA	--	--	--	< 0.047	< 0.046	< 0.046	< 0.046	< 0.53	< 0.051	< 0.054	< 0.050	< 0.050	< 0.043	< 0.042	< 0.041	< 0.045
N-Methyl perfluorooctane sulfonamidoethanol	NMeFOSE	--	--	--	0.19 J	1.4	1.4	1.4	< 0.91	< 0.089	< 0.093	< 0.087	< 0.087	< 0.074	< 0.072	< 0.071	< 0.078
MeFOSAA	MeFOSAA	--	--	--	< 0.44	< 0.44	0.44 J	< 0.44	< 5.0	< 0.49	< 0.51	< 0.48	< 0.48	< 0.41	< 0.40	< 0.39	< 0.43
EtFOSAA	EtFOSAA	--	--	--	< 0.42	< 0.42	< 0.41	< 0.42	< 4.8	< 0.46	< 0.49	< 0.45	< 0.46	< 0.39	< 0.38	< 0.37	< 0.40
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic ac	F-53B Major	--	--	--	< 0.031	< 0.031	< 0.030	< 0.030	< 0.35	< 0.034	< 0.035	< 0.033	< 0.033 F1	< 0.028	< 0.028	< 0.027	< 0.029
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic ac	F-53B Minor	--	--	--	< 0.025	< 0.025	< 0.024	< 0.025	< 0.28	< 0.028	< 0.029	< 0.027	< 0.027	< 0.023	< 0.022	< 0.022	< 0.024
Total PFAS		--	--	--	6	12	16	9	6	6	3	2	2	16	0	2	4

Table 2
Soil Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Notes:

[J] Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

[B] Compound was found in the blank and sample

[*] Isotope dilution and/or LCS/LCSD is outside acceptance limits

[F1] MS and/or MSD Recovery is outside acceptance limits

-- No Generic RCL established.

Generic RCLs from WDNR RR-890: WDNR RCL Calculator December 2017

PFAS = Per-Fluorinated Alkyl Substances

NA = Not analyzed

mg/kg = miligrams per kilogram

ug/kg = micrograms per kilogram

AECOM

Table 3
Detected PFAS in Water Samples
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

							ABBR.	PFBA	PFBS	PFPeA	PFPeS	PFHxA	PFHxS	6:2 FTS	PFHpA	PFHpS	PFOA	APFO	PFOS
							Analyte:	Perfluorobutanoic acid (PFBA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanoic acid (PFPeA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorohexanoic acid (PFHxA)	Perfluorohexanesulfonic acid (PFHxS)	6:2 FTS	Perfluoroheptanoic acid (PFHpA)	Perfluoroheptanesulfonic Acid (PFHpS)	Perfluorooctanoic acid (PFOA)	Ammonium Perfluorooctanoate	Perfluorooctanesulfonic acid (PFOS)
							CAS:	375-22-4	375-73-5	2706-90-3	2706-91-4	307-24-4	355-46-4	27619-97-2	375-85-9	375-92-8	335-67-1	3825-26-1	1763-23-1
							Units:	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	--	ng/L	ng/L	ng/L
							Proposed ES:	10000	450000	--	--	150000	40	--	--	--	See Combined Limit	--	See Combined Limit
							Proposed PAL:	2000	90000	--	--	30000	4	--	--	--		--	
Order	Location	Location Type	Field ID		Sampling Company	Sample Date	Sample Type												
1	Surface Water	East	Surface Water	Surface Water	NSEC	7/19/2019	N	14	0.71 J	12	< 0.28	26	1.9 B	790	3	< 0.18	*2.7*	2.8	*13 Cl*
2	North Power Pole	East	North Power Pole	North Power Pole	AECOM	7/24/2019	N	170	5.1 J	150	1.8 JI	230	*18 B*	4900	21	< 0.95	***24***	25	***31***
3	Trans Sump	East	Trans Sump	Trans Sump	AECOM	10/28/2019	N	580 B	1.0 J	3600	< 0.29	1300	1.4 JB	3500	260	< 0.18	*15*	15	*14*
4	Trans Sump	East	Trans Sump	Trans Sump	AECOM	5/21/2020	N	460 B	5.3 I	3100	< 0.28	1400	1.8 B	6700	230	< 0.17	*14*	15	***41***
5	Trans Sump	East	Trans Sump	Trans Sump	AECOM	10/2/2020	N	480	< 3.8	2800	< 5.7	1400	< 11	4600	220	< 3.6	< 16	< 17	*19 J*
6	ETW-1	East	ETW-1	ETW-1	AECOM	10/28/2019	N	240 B	2.0	1700	< 0.29	630	1.2 JB	1200	150	< 0.18	*7.4*	7.7	***23 I***
7	MW-1	East	MW-1	MW-1	AECOM	5/21/2020	N	97 B	1.1 J	630	< 0.29	210	0.69 JB	260	45	< 0.18	*5.1*	5.3	*8.9*
8	MW-1	East	MW-1 FD	MW-1 FD	AECOM	5/21/2020	FD	98 B	1.0 J	550	< 0.28	210	0.78 JB	250	46	< 0.18	*5.1*	5.3	*9*
9	MW-1	East	MW-1	MW-1	AECOM	8/20/2020	N	300	2.3	1900	< 0.29	740	1.2 JB	1400	130	< 0.19	*7.2*	7.5	*7.9*
10	Storm Ceptor	East	Catch Basin	Catch Basin	NSEC	7/19/2019	N	4.3	0.33 J	3.2	< 0.27	7	0.81 J B	230	0.67 J	< 0.17	1.8	1.9	*7 Cl*
11	Storm Ceptor	East	Storm Ceptor	Storm Ceptor	AECOM	7/25/2019	N	11	2.5	27	< 0.30	24	2.0 B	470	12	< 0.19	*5.4*	5.6	*7*
12	Storm Ceptor	East	Storm Ceptor	Storm Ceptor	AECOM	10/28/2019	N	58 B	2.8	350	< 0.28	140	2.5 B	110	21	< 0.18	*4.6*	4.8	*5.6*
13	Storm Ceptor	East	Storm Ceptor	Storm Ceptor	AECOM	8/20/2020	N	90	< 2.0	560	< 3.1	210	< 1.7	73 J	43	< 1.9	< 8.7	< 9.0	< 5.5
14	LVN-6	East	LW1	LW1	SCS	7/19/2019	N	< 3.0	< 1.7	6.6 J	< 2.6	10 J	< 1.5	250	< 2.2	< 1.6	< 7.3	< 7.6	< 4.7
15	LVN-6	East	LW (Basin)	LW (Basin)	NSEC	7/19/2019	N	1.8	0.21 J	1.5 J	< 0.27	6.3	0.40 J B	80	0.41 J	< 0.17	1.6 J	1.7 J	*2.9 CL*
16	LVN-6	East	LW2	LW2	SCS	7/19/2019	N	1.8	< 0.17	1.5 J	< 0.26	5	0.29 J B	97	0.33 J	< 0.16	0.96 J	1.0 J	< 0.46
17	LVN-6	East	LVN-6	LVN-6	AECOM	7/25/2019	N	5.0	< 0.20	1.7 J	< 0.30	2.2	0.49 JB	2.9 J	1.2 J	< 0.19	1.6 J	1.7 J	0.76 J
18	LVN-6	East	LVN-6	LVN-6	AECOM	10/28/2019	N	26 B	1.7 J	140	< 0.29	53	1.2 JB	26	9.9	< 0.18	*2.9*	3.0	*3.1*
19	LVN-6	East	LVN-6	LVN-6	AECOM	8/20/2020	N	54	3.0	310	< 0.28	120	2.1 B	87	25	< 0.18	*3.8*	3.9	*5.4*
20	River Outlet	East	River Outlet	River Outlet	AECOM	7/25/2019	N	6.4	< 0.19	< 0.46	< 0.28	1.5 J	0.76 JB	< 1.9	0.88 J	< 0.18	1.8 J	1.9 J	1.1 J
21	River Outlet	East	River Outlet	River Outlet	AECOM	10/28/2019	N	5.5 B	0.81 J	2.2	< 0.29	1.9	2.0 B	< 1.9	1.2 J	< 0.19	1.7 J	1.7 J	*2.3*
22	River Outlet	East	River Outlet	River Outlet	AECOM	8/20/2020	N	4.3	1.0 J	1.5 J	< 0.29	1.3 J	0.98 JB	< 2.0	0.81 J	< 0.19	1.2 J	1.2 J	< 0.53
50	WCB Sump	West	WCB Sump	WCB Sump	AECOM	10/28/2019	N	6.6 B	1.1 J	4.0	< 0.29	2.1	0.78 JB	< 1.9	1.1 J	< 0.18	1.9	2.0	*4.6*
51	WCB Sump	West	WCB Sump Dup	WCB Sump Dup	AECOM	10/28/2019	FD	6.4 B	1.2 J	3.9	< 0.29	1.9	0.91 JB	< 1.9	1.1 J	< 0.18	1.8 J	1.9 J	*4.1*
52	WCB Sump	West	WCB Sump	WCB Sump	AECOM	5/21/2020	N	8.0 B	1.5 J	7.6	< 0.29	3.5	1.1 JB	< 1.9	1.5 J	< 0.19	1.9	2.0	*3.8*
53	WCB Sump	West	WCB Sump	WCB Sump	AECOM	8/20/2020	N	8.7	2.6	7.6	< 0.29	3.9	1.2 JB	< 1.9	1.9	< 0.18	*3.1*	3.3	*6.4*
54	WCB Sump	West	WCB Sump FD	WCB Sump FD	AECOM	8/20/2020	FD	8.8	2.4	8.2	< 0.29	3.9	1.3 JB	< 1.9	1.9	< 0.18	*3.2*	3.3	*6.3*
55	BNT-3	West	BNT-3	BNT-3	AECOM	7/25/2019	N	15	2.9	17	0.78 J	11	*5.7 B*	30	5.0	0.29 J	*6*	6.2	*13*
56	BNT-3	West	BNT-3	BNT-3	AECOM	10/28/2019	N	34 B	3.5	140	0.37 J	47	3.4 B	17 J	9.1	< 0.18	*4.8*	5.0	*10*
57	BNT-3	West	BNT-3	BNT-3	AECOM	8/20/2020	N	5.7	2.1	4.2	1.3 J	3.9	*8.2 B*	< 1.9	1.8 J	< 0.18	*3.2*	3.3	*14*
58	BNT-4	West	BNT-4	BNT-4	AECOM	7/25/2019	N	< 4.4	< 2.5	< 6.1	< 3.8	< 7.3	*11 JB*	49 J	< 3.1	< 2.4	*12 J*	13 J	*14 J*
59	BNT-4	West	BNT-4	BNT-4	AECOM	10/28/2019	N	12 B	2.9	22	0.49 J	9.2	3.0 B	3.3 J	2.7	< 0.18	*3*	3.2	*5.1*
60	BNT-4	West	BNT-4	BNT-4	AECOM	8/20/2020	N	5.7	2.5	3.5	1.3 J	3.7	*8.4 B*	< 1.9	1.9	< 0.18	*3.1*	3.2	*13*
61	BNT-8	West	Blount	Blount	NSEC	7/19/2019	N	12	< 0.16	3.6	< 0.25	3.9	3.9 B	42	1.2 J	< 0.16	*3*	3.1	*5.6*
62	BNT-8	West	Blount Street	Blount Street	NSEC	7/19/2019	N	9.5	1.8	2.8	< 0.26	3.9	*4.4 B*	45	1.5 J	< 0.16	*3.2*	3.4	*6.1*
63	BNT-8	West	BNT-8	BNT-8	AECOM	7/25/2019	N	8.5	4.5	6.7	< 0.31	5.8	*6.7 B*	47	2.3	< 0.19	*5*	5.2	*12*
64	BNT-8	West	BNT-8	BNT-8	AECOM	10/28/2019	N	9.9 B	2.6	16	0.43 J	8.1	3.6 B	2.6 J	2.2	< 0.19	*3.3*	3.4	*5.7*
65	BNT-8	West	BNT-8	BNT-8	AECOM	8/20/2020	N	5.3	2.3	3.4	1.1 J	3.7	*8.6 B*	< 1.9	1.8 J	< 0.18	*3*	3.1	*13*
66	Blount St Outlet	West	Blount St.Outlet	Blount St.Outlet	AECOM	7/25/2019	N	9.0	3.6	5.6	1.3 J	5.7	*8.2 B*	19	2.7	< 0.18	*4.9*	5.1	*13*
67	Blount St Outlet	West	Blount St.Outlet FD	Blount St.Outlet FD	AECOM	7/25/2019	FD	10	4.0	5.6	1.1 J	5.5	*8.7 B*	29	2.8	0.25 J	*5.4*	5.6	*12*
68	Blount St Outlet	West	Blount St Outlet	Blount St Outlet	AECOM	10/28/2019	N	6.1 B	1.8 J	3.1	1.0 J	3.6	*7.4 B*	< 2.0	1.7 J	0.22 J	*3*	3.1	*13*
69	Blount St Outlet	West	Blount St Outlet Dup	Blount St Outlet Dup	AECOM	10/28/2019	FD	6.5 B	1.7 J	3.1	0.99 J	3.6	*7.3 B*	< 1.9	1.6 J	< 0.18	*2.8*	3.0	*15*
70	Blount St Outlet	West	Blount St. Outlet	Blount St. Outlet	AECOM	8/20/2020	N	5.4	2.0	3.2	1.1 J	3.4	*8.5 B*	< 1.9	1.7 J	< 0.18	*3*	3.1	*13*
71	Blount St Outlet	West	Blount St. Outlet FD	Blount St. Outlet FD	AECOM	8/20/2020	FD	5.3	2.0	3.2	1.3 J	3.5	*8.6 B*	< 2.0	1.7 J	< 0.19	*3.2*	3.3	*14*
72	Path Outlet	West	Path Outlet	Path Outlet	AECOM	7/25/2019	N	8.6	1.9	3.6	1.3 J	3.3	*8.2 B*	3.0 J	1.6 J	< 0.18	*3.9*	4.0	*18*
73	Path Outlet	West	Path Outlet	Path Outlet	AECOM	10/28/2019	N	8.2 B	3.3	3.8	0.79 J	4.0	*7.0 B*	< 1.9	2.0	0.21 J	*3.5*	3.6	*12*
74	Path Outlet	West	Path Outlet	Path Outlet	AECOM	8/20/2020	N	5.6	2.1	3.3	1.2 J	3.6	*8.4 B*	< 2.0	1.8 J	< 0.19	*3.1*	3.3	*16*

Notes:
PFAS = Per- and polyfluoroalkyl substances
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.
I = Value is EMPC (estimated maximum possible concentration).
CL = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
(1) Sum of FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS, and PFOA
Bold value = NR 140 Enforcement Standard (ES) Exceedance, Recommended/Proposed.
Italic value = NR 140 Preventive Action Limit Exceedance, Recommended/Proposed.
-- No NR 140 ES or PAL established.
NA = Not analyzed

Table 3
Detected PFAS in Water Samples
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

								ABBR.	8:2 FTS	PFNA	PFDA	10:2 FTS	PFTeDA	PFOSA	NEtFOSE		
								Analyte:	8:2 FTS	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	10:2 FTS	Perfluorotetradecanoic acid (PFTeA)	Perfluorooctanesulfonamide (FOSA)	NEtFOSE	Sum of 6 Analytes (1)	Total PFAS
								CAS:	39108-34-4	375-95-1	335-76-2	120226-60-0	376-06-7	754-91-6	1691-99-2	Comb_6_PFAS	TPFAS
								Units:	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
								Proposed ES:	--	30	300	--	10000	See Combined Limit	See Combined Limit	20	--
								Proposed PAL:	--	3	60	--	2000			2	--
Order	Location	Location Type	FIeld ID		Sampling Company	Sample Date	Sample Type										
1	Surface Water	East	Surface Water	Surface Water	NSEC	7/19/2019	N		21	0.60 J	0.68 J	1.1 J	0.60 J	< 0.32	NA	*16*	890
2	North Power Pole	East	North Power Pole	North Power Pole	AECOM	7/24/2019	N		17 J	*6.0 J*	5.1 JI	< 0.95	< 1.5	< 1.8	NA	***55***	5600
3	Trans Sump	East	Trans Sump	Trans Sump	AECOM	10/28/2019	N		< 39	*3.8*	1.6 J	< 3.7	< 0.28	< 0.34	< 0.82	***29***	9300
4	Trans Sump	East	Trans Sump	Trans Sump	AECOM	5/21/2020	N		< 92	*7.6*	2.7	< 8.7	< 0.27	0.43 J	< 0.78	***55***	12000
5	Trans Sump	East	Trans Sump	Trans Sump	AECOM	10/2/2020	N		< 8.8	*7.5 J*	< 5.9	< 13	< 14	< 19	< 16	*19*	9500
6	ETW-1	East	ETW-1	ETW-1	AECOM	10/28/2019	N		< 9.7	1.9	1.4 J	< 0.92	< 0.28	< 0.34	< 0.82	***30***	4000
7	MW-1	East	MW-1	MW-1	AECOM	5/21/2020	N		< 19	1.7 J	1.3 J	< 1.8	< 0.28	0.34 J	< 0.82	*14*	1300
8	MW-1	East	MW-1 FD	MW-1 FD	AECOM	5/21/2020	FD		< 19	2.0	1.1 J	< 1.8	< 0.27	0.43 J	< 0.80	*15*	1200
9	MW-1	East	MW-1	MW-1	AECOM	8/20/2020	N		< 2.0	1.6 J	1.1 J	< 0.19	< 0.28	< 0.34	< 0.83	*15*	4500
10	Storm Ceptor	East	Catch Basin	Catch Basin	NSEC	7/19/2019	N		19	0.43 J	0.35 J	1.5 J	< 0.26	< 0.32	NA	*8.8*	280
11	Storm Ceptor	East	Storm Ceptor	Storm Ceptor	AECOM	7/25/2019	N		< 20	0.77 J	0.82 J	< 1.9	< 0.29	< 0.35	NA	*12*	570
12	Storm Ceptor	East	Storm Ceptor	Storm Ceptor	AECOM	10/28/2019	N		3.2 J	0.74 J	0.48 J	0.35 J	< 0.28	1.7 J	0.89 J	*13*	710
13	Storm Ceptor	East	Storm Ceptor	Storm Ceptor	AECOM	8/20/2020	N		< 20	< 2.8	< 3.2	< 1.9	< 3.0	< 3.6	< 8.7	< 200	980
14	LVN-6	East	LW1	LW1	SCS	7/19/2019	N		< 17	< 2.3	< 2.7	< 1.6	< 2.5	< 3.0	NA	< 16	270
15	LVN-6	East	LW (Basin)	LW (Basin)	NSEC	7/19/2019	N		2.5 J	< 0.25	< 0.28	0.87 J	< 0.26	< 0.32	NA	*4.5*	100
16	LVN-6	East	LW2	LW2	SCS	7/19/2019	N		2.8 J	< 0.23	< 0.27	0.90 J	< 0.25	< 0.30	NA	0.96	110
17	LVN-6	East	LVN-6	LVN-6	AECOM	7/25/2019	N		< 2.0	0.36 J	< 0.31	< 0.19	< 0.29	< 0.35	NA	*2.4*	18
18	LVN-6	East	LVN-6	LVN-6	AECOM	10/28/2019	N		< 1.9	0.66 J	0.41 J	< 0.18	< 0.28	0.76 J	< 0.82	*6.8*	270
19	LVN-6	East	LVN-6	LVN-6	AECOM	8/20/2020	N		< 1.9	0.92 J	0.82 J	< 0.18	< 0.27	< 0.33	< 0.80	*9.2*	620
20	River Outlet	East	River Outlet	River Outlet	AECOM	7/25/2019	N		< 1.9	0.54 J	< 0.29	< 0.18	< 0.27	< 0.33	NA	*2.9*	15
21	River Outlet	East	River Outlet	River Outlet	AECOM	10/28/2019	N		< 1.9	0.47 J	< 0.30	< 0.19	< 0.28	< 0.34	< 0.83	*4.0*	20
22	River Outlet	East	River Outlet	River Outlet	AECOM	8/20/2020	N		< 2.0	0.34 J	< 0.30	< 0.19	< 0.28	0.51 J	< 0.83	1.7	13
50	WCB Sump	West	WCB Sump	WCB Sump	AECOM	10/28/2019	N		< 1.9	0.68 J	0.54 J	< 0.18	< 0.28	< 0.34	< 0.82	*6.5*	25
51	WCB Sump	West	WCB Sump Dup	WCB Sump Dup	AECOM	10/28/2019	FD		< 1.9	0.59 J	0.55 J	< 0.18	< 0.28	< 0.34	< 0.83	*5.9*	24
52	WCB Sump	West	WCB Sump	WCB Sump	AECOM	5/21/2020	N		< 1.9	0.57 J	0.49 J	< 0.19	< 0.28	0.51 J	< 0.83	*6.2*	32
53	WCB Sump	West	WCB Sump	WCB Sump	AECOM	8/20/2020	N		< 1.9	1.2 J	0.81 J	< 0.18	< 0.28	0.98 J	< 0.81	*10*	42
54	WCB Sump	West	WCB Sump FD	WCB Sump FD	AECOM	8/20/2020	FD		< 1.9	1.2 J	0.75 J	< 0.18	< 0.28	1.2 J	< 0.82	*11*	42
55	BNT-3	West	BNT-3	BNT-3	AECOM	7/25/2019	N		< 2.0	1.0 J	0.71 JI	< 0.19	< 0.29	< 0.34	NA	*19*	110
56	BNT-3	West	BNT-3	BNT-3	AECOM	10/28/2019	N		< 1.9	0.86 J	0.80 J	< 0.18	< 0.27	< 0.33	< 0.79	*15*	280
57	BNT-3	West	BNT-3	BNT-3	AECOM	8/20/2020	N		< 1.9	0.92 J	< 0.30	< 0.18	< 0.28	0.37 J	< 0.82	*18*	49
58	BNT-4	West	BNT-4	BNT-4	AECOM	7/25/2019	N		< 25	< 3.4	< 3.9	< 2.4	< 3.6	< 4.4	NA	***26***	99
59	BNT-4	West	BNT-4	BNT-4	AECOM	10/28/2019	N		< 1.9	0.56 J	0.70 J	< 0.18	< 0.28	0.34 J	< 0.82	*8.4*	68
60	BNT-4	West	BNT-4	BNT-4	AECOM	8/20/2020	N		< 1.9	0.56 J	< 0.29	< 0.18	< 0.27	0.89 J	< 0.80	*17*	48
61	BNT-8	West	Blount	Blount	NSEC	7/19/2019	N		1.7 J	0.55 J	0.90 J	0.28 J	< 0.24	< 0.29	NA	*8.6*	82
62	BNT-8	West	Blount Street	Blount Street	NSEC	7/19/2019	N		1.9 J	0.55 J	0.73 J	0.28 J	0.44 J	< 0.30	NA	*9.3*	86
63	BNT-8	West	BNT-8	BNT-8	AECOM	7/25/2019	N		< 2.0	0.74 J	0.84 J	< 0.19	< 0.30	< 0.36	NA	*17*	110
64	BNT-8	West	BNT-8	BNT-8	AECOM	10/28/2019	N		< 2.0	0.56 J	0.90 J	< 0.19	< 0.29	0.39 J	< 0.84	*9.4*	60
65	BNT-8	West	BNT-8	BNT-8	AECOM	8/20/2020	N		< 1.9	< 0.25	< 0.29	< 0.18	< 0.27	0.61 J	< 0.79	*17*	46
66	Blount St Outlet	West	Blount St.Outlet	Blount St.Outlet	AECOM	7/25/2019	N		< 1.9	0.60 J	0.75 J	< 0.18	< 0.28	< 0.34	NA	*18*	79
67	Blount St Outlet	West	Blount St.Outlet FD	Blount St.Outlet FD	AECOM	7/25/2019	FD		< 2.0	0.66 J	0.94 J	< 0.19	< 0.30	< 0.36	NA	*17*	92
68	Blount St Outlet	West	Blount St Outlet	Blount St Outlet	AECOM	10/28/2019	N		< 2.0	0.57 J	< 0.31	< 0.19	< 0.29	0.4 J	< 0.84	*16*	45
69	Blount St Outlet	West	Blount St Outlet Dup	Blount St Outlet Dup	AECOM	10/28/2019	FD		< 1.9	0.58 J	0.34 J	< 0.18	< 0.27	< 0.33	< 0.79	*18*	47
70	Blount St Outlet	West	Blount St. Outlet	Blount St. Outlet	AECOM	8/20/2020	N		< 1.9	0.51 J	< 0.30	< 0.18	< 0.28	0.78 J	< 0.82	*17*	46
71	Blount St Outlet	West	Blount St. Outlet FD	Blount St. Outlet FD	AECOM	8/20/2020	FD		< 2.0	0.38 J	< 0.31	< 0.19	< 0.29	0.42 J	< 0.85	*18*	47
72	Path Outlet	West	Path Outlet	Path Outlet	AECOM	7/25/2019	N		< 1.9	0.67 J	0.62 J	< 0.18	< 0.28	< 0.34	NA	***22***	59
73	Path Outlet	West	Path Outlet	Path Outlet	AECOM	10/28/2019	N		< 1.9	0.71 J	0.47 J	< 0.18	< 0.28	0.37 J	< 0.81	*16*	50
74	Path Outlet	West	Path Outlet	Path Outlet	AECOM	8/20/2020	N		< 2.0	0.61 J	< 0.30	< 0.19	< 0.28	0.88 J	< 0.83	***20***	50

Notes:
PFAS = Per- and polyfluoroalkyl substances
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.
I = Value is EMPC (estimated maximum possible concentration).
CL = The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.
(1) Sum of FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS, and PFOA
Bold value = NR 140 Enforcement Standard (ES) Exceedance, Recommended/Proposed.
Italic value = NR 140 Preventive Action Limit Exceedance, Recommended/Proposed.
-- No NR 140 ES or PAL established.
NA = Not analyzed

AECOM

TABLE 4
PFAS FIELD QC BLANK RESULTS
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

							Detects (ng/L)									
FIeld ID	**Sample Date**	**Sample Type**	**Equipment**	**Location Collected**	**Comment**	**Lab ID**	**PFBA**	**PFPeA**	**PFHxA**	**PFHxS**	**PFHpA**	**PFOS**	**PFTeDA**	**PFOSA**	**NEtFOSE**	**TPFAS**
EB20190724	7/24/2019	EB	Disposable Scoop	Main St terrace	SS-01 to SS-17	500-167225-22	< 0.35	< 0.48	< 0.57	0.27 JB	< 0.25	< 0.53	< 0.29	< 0.35	NA	0.3
FB20190724	7/24/2019	FB		Main St terrace	SS-01 to SS-17	500-167225-21	< 0.33	< 0.47	< 0.55	0.36 JIB	< 0.24	< 0.51	< 0.28	< 0.33	NA	0.4
EB20190725	7/25/2019	EB	HDPE Bailer	Main St terrace	Water samples	320-52698-2	< 0.32	< 0.45	< 0.54	0.28 JB	< 0.23	< 0.50	< 0.27	< 0.32	NA	0.3
FB20190725	7/25/2019	FB		Main St terrace	Water samples	320-52698-3	< 0.35	< 0.49	< 0.58	0.33 JB	< 0.25	< 0.54	0.75 JB	< 0.35	NA	1.1
Equipment Blank	7/26/2019	EB	Disposable Scoop	Substation	SS-18 to SS-28	500-167417-13	< 0.33	< 0.46	< 0.54	0.27 JB	< 0.23	< 0.51	< 0.27	< 0.33	NA	0.3
Field Blank	7/26/2019	FB		Substation	SS-18 to SS-28	500-167417-12	< 0.33	< 0.46	< 0.54	0.28 JB	< 0.23	< 0.51	< 0.27	< 0.33	NA	0.3
EB08062019	8/6/2019	EB	Disposable Scoop	Substation?	Waste Characterization	500-167874-1	< 0.32	< 0.44	< 0.52	0.32 JB	< 0.23	< 0.49	< 0.26	< 0.32	NA	0.3
FB08062019	8/6/2019	FB		Substation?	Waste Characterization	500-167874-2	< 0.31	< 0.43	< 0.51	0.3 JB	< 0.22	< 0.48	< 0.26	< 0.31	NA	0.3
EB08082019	8/8/2019	EB	Disposable Scoop	Main St terrace	RES-SS-01,12,08	500-168051-2	< 0.31	< 0.44	< 0.52	0.26 JB	< 0.22	< 0.49	< 0.26	< 0.31	NA	0.3
FB08082019	8/8/2019	FB		Main St terrace	RES-SS-01,12,08	500-168051-1	< 0.34	< 0.48	< 0.56	0.29 JB	< 0.24	< 0.52	< 0.28	< 0.34	NA	0.3
EB08282019	8/28/2019	EB	Disposable Scoop	E Wash Dewatering	CON-1 to CON-5	320-53858-1	< 0.33	< 0.46	< 0.54	0.25 JB	< 0.23	< 0.50	< 0.27	< 0.33	< 0.79	0.3
FB08282019	8/28/2019	FB		E Wash Dewatering	CON-1 to CON-5	320-53858-2	< 0.33	< 0.46	< 0.55	0.25 JB	< 0.24	< 0.51	< 0.27	< 0.33	< 0.80	0.3
FIELD BLANK	10/8/2019	FB		Coal Yard	Water samples	1903574-07	< 0.370	< 0.650	< 1.11	< 0.481	< 0.300	0.412 J, B	< 0.383	< 0.899	< 4.79	0.4
Equipment Blank	10/28/2019	EB	HDPE Bailer	Near BNT-8	Water samples	320-55756-15	0.96 JB	< 0.48	< 0.57	0.25 JB	< 0.24	< 0.53	< 0.28	< 0.34	< 0.83	1.2
Field Blank	10/28/2019	FB		Near BNT-8	Water samples	320-55756-14	0.61 JB	< 0.48	< 0.57	0.27 JB	< 0.25	< 0.53	< 0.29	0.37 J	1.8 J	3.1
EB 20191029	10/29/2019	EB	Disposable Scoop	Blount St gate	SS-29 to SS-55	320-55814-2	< 0.34	< 0.48	< 0.57	0.44 JB	< 0.24	< 0.53	< 0.28	< 0.34	< 0.83	0.4
Equipment Blank	10/29/2019	EB		Substation	FireAde AFFF	320-55913-2	1.2 JB	0.61 J	< 0.55	0.34 JB	0.27 J	< 0.51	< 0.28	< 0.33	< 0.81	2.4
FB 20191029	10/29/2019	FB		Blount St gate	SS-29 to SS-55	320-55814-1	< 0.33	< 0.47	< 0.55	0.42 JB	< 0.24	< 0.52	< 0.28	< 0.33	< 0.81	0.4
Equipment Blank	10/31/2019	EB		Truax	Phos-Chek AFFF	320-55912-2	0.43 J	< 0.47	< 0.56	0.25 JB	< 0.24	< 0.52	< 0.28	< 0.34	< 0.82	0.7
EB-Scoop	4/7/2020	EB	Disposable Scoop	Livingston St	SS-56 to SS-78	320-60052-25	< 0.28	< 0.40	< 0.47	0.22 JB	< 0.20	< 0.44	< 0.24	0.6 JB	< 0.69	0.8
EB-Auger	4/20/2020	EB	Geoprobe Auger	Livingston St	MW-1 Install	320-60299-1	< 0.36	< 0.50	0.8 J	0.32 JB	< 0.25	< 0.55	< 0.30	0.7 JB	< 0.87	1.8
EB-Well Screen	4/20/2020	EB	Well Screen	Livingston St	MW-1 Install	320-60299-2	< 0.35	< 0.50	< 0.59	0.28 JB	< 0.25	< 0.55	< 0.29	0.79 JB	< 0.86	1.1
EB 05212020	5/21/2020	EB	Peristaltic tubing	Blount St gate	GW samples	320-61091-4	0.45 JB	< 0.47	< 0.55	0.33 JB	< 0.24	1.4 J	< 0.28	0.34 J	< 0.81	2.5
FB 05212020	5/21/2020	FB		Blount St gate	GW samples	320-61091-3	< 0.33	< 0.46	< 0.54	0.25 JB	< 0.23	< 0.50	< 0.27	< 0.33	< 0.79	0.3
FB 20200709	7/9/2020	FB		E side of Substation	SS-79 to SS-82	500-184788-1	< 0.33	< 0.46	< 0.54	0.26 JB	< 0.23	< 0.51	< 0.27	0.42 JB	< 0.80	0.7
EB 20200820	8/20/2020	EB	Peristaltic tubing	Substation	Water samples	320-63888-11	< 0.34	< 0.48	< 0.57	0.33 JB	< 0.25	< 0.53	< 0.29	< 0.34	< 0.84	0.3
FB 20200820	8/20/2020	FB		Substation	Water samples	320-63888-10	< 0.34	< 0.47	< 0.56	< 0.16	< 0.24	< 0.52	< 0.28	< 0.34	< 0.82	0.0
Field Blank	10/2/2020	FB		Substation	Water samples	320-65285-2	< 2.4	< 0.48	< 0.57	< 0.56	< 0.25	0.8 J	< 0.72	< 0.97	< 0.84	0.8

Notes:
PFAS = Per- and polyfluoroalkyl substances

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.
I = Value is EMPC (estimated maximum possible concentration).
NA = Not analyzed

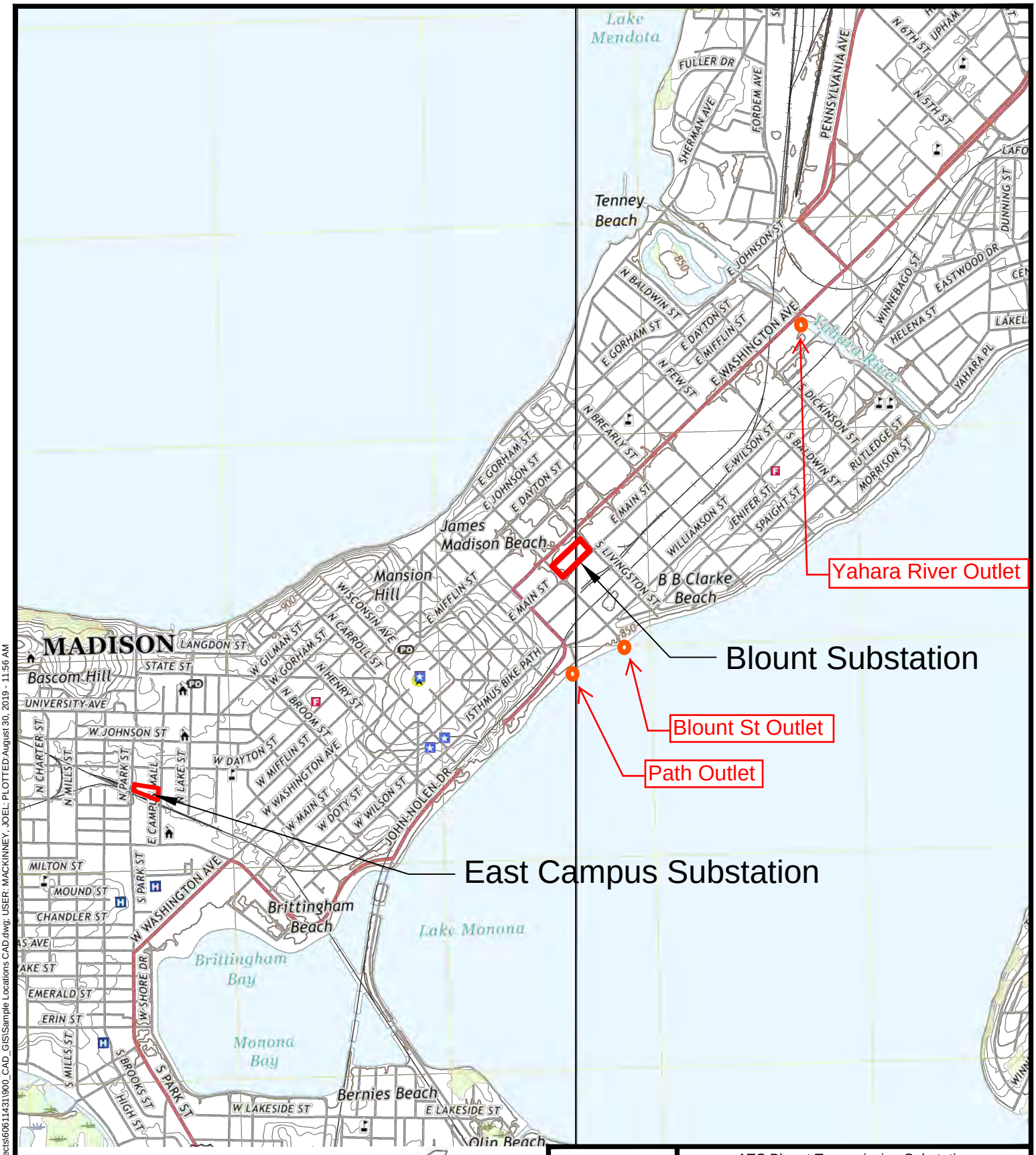
Table 5
Product Sample Laboratory Analytical Results
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Parameters		FireAde AFFF (Madison FD) 10/29/2019	Phos-Check AFFF (Truax FD) 10/31/2019
PFAS (mg/L)	**ABBR.**		
Perfluorobutanoic acid	PFBA	0.00024	0.00014
Perfluoropentanoic acid	PFPeA	0.00025	0.000028 J
Perfluorohexanoic acid	PFHxA	0.00037	0.00033
Perfluorohexanesulfonoic acid	PFHxS	0.0000086 JB	0.0000075 JB
6:2 Fluorotelomer sulfonic acid	6:2 FTS	0.0012	0.039
Perfluoroheptanoic acid	PFHpA	< 0.0000062	0.0000079 J
Perfluorooctanoic acid	PFOA	< 0.000022	0.000023 J
Ammonium Perfluorooctanoate	APFO	< 0.000022	0.000024 J
10:2 Fluorotelomer Sulfonic Acid	10:2 FTS	0.0000096 J	0.000010 J
Perfluorotetradecanoic acid	PFTeDA	0.0000098 J	< 0.0000072
HFPO-DA	GenX	0.000048 J	< 0.000038
Total PFAS		0.0021	0.040

Notes:
PFAS = Per-Fluorinated Alkyl Substances
mg/L = miligrams per liter
J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
B Compound was found in the blank and sample

Total PFAS Mass Calculation			
		FireAde AFF	Phos-Check AFFF
Total PFAS Concentration	mg/L	0.0021	0.0400
Foam Product Applied at Substation	Gallons	55	4
Foam Product Applied at Substation	Liters	208	15
Mass of PFAS applied at Substation	mg	**0.44**	**0.61**

FIGURES



3000 4000 5000 6000
FEET

Notes:
1. TOPO maps from http://store.usgs.gov Madison East and West quadrangles, dated: 2018

QUADRANGLE LOCATION

AECOM
Milwaukee Office
1555 RiverCenter Dr
Milwaukee, WI
414.944.6080

ATC Blount Transmission Substation
722 East Main St.
Madison, WI

SITE LOCATION

Project Number:	Drawn By:	Date:	Figure No. 1
60611431	EMS/JSM	8/30/2019	

File: \\USMWK1FS001\Prod\Data\Projects\60611431\900_CAD_GIS\Sample Locations CAD.dwg; USER: MACKINNEY, JOEL; PLOTTED:August 30, 2019 - 11:56 AM

LEGEND

SS SOIL SAMPLES

MW MONITORING WELL

E Washington Ave

E Main St

S Blount St

S Livingston St

SS-75 SS-76 SS-77 SS-78 SS-74 SS-73 SS-71 SS-70 SS-72 SS-69

CON-1 CON-2 CON-3 CON-4 CON-5

SS-56 SS-57 SS-58 SS-59 SS-60 SS-61

SS-18 SS-80 SS-62 SS-17 SS-63 SS-38 SS-37 SS-36 SS-35 SS-34 SS-33 SS-32 SS-31 SS-30 SS-29

CONTROL BUILDING

CONTROL BUILDING

BREAKER SOIL

SS-81 SS-19 SS-64 MW-1 SS-16 SS-15 SS-14 SS-13 SS-46 SS-47 SS-45 SS-44 SS-43 SS-42 SS-41 SS-40 SS-39 SS-79

WEST CONTROL BUILDING

SS-48 SS-49 SS-50 SS-51 SS-52 SS-53 SS-54 SS-55

EAST CONTROL BUILDING

SS-66 SS-65 SS-68 SS-67

SS-20 SS-21 SS-22 SS-23 SS-24 SS-25 SS-26 SS-82 SS-27 SS-28

SS-12 SS-11 SS-10 SS-09 SS-08 SS-07 SS-06 SS-05 SS-04 SS-03 SS-02 SS-01

TN N

0' 30' 60'

SCALE

DIGGERS HOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com

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Plot File Date Created: Oct/16/2020

Filename: \\USMWK1FS001\PROD\DATA\PROJECTS\60611431900_CAD_GIS\910 CAD\20-SHEETS\06_BLOUNT SOIL JULY2020.DWG

AECOM

PROJECT

ATC BLOUNT SUBSTATION RESPONSE AND CLEANUP

MADISON, WISCONSIN

CLIENT

AMERICAN TRANSMISSION CO.

2 FEN OAK CT.
MADISON, WI 53718
(866) 899-3204 tel
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CONSULTANT

AECOM
1555 N RIVERCENTER DR.
MILWAUKEE, WI 53212
(414) 944-6080 tel
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REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

60611431

DRAWING TITLE

SOIL SAMPLE LOCATIONS

DRAWING NUMBER **SHEET NUMBER**

Figure 2

LEGEND

- SS — SOIL SAMPLES
- MONITORING WELL/ SUMP
- 6:2 FTS Detected >10 ug/Kg (Excavated July 2020)
- 6:2 FTS Detected 1-10 ug/Kg
- 6:2 FTS Detected <1 ug/Kg

S Livingston St

CON-1 CON-2 CON-3 CON-4 CON-5

SS-56 SS-57 SS-58 SS-59 SS-60 SS-61 SS-62

Line 6907 UG Riser Excavation
(8'x30'x10')

SS-18 **SS-80** SS-17 SS-63

SS-30 SS-31 SS-32 SS-33 SS-34 SS-35 SS-36 SS-37 SS-38

TRANS SUMP

CONTROL BUILDING

CONTROL BUILDING

BREAKER SOIL

SS-81

SS-29 SS-16 SS-15 SS-19 SS-64

WCB SUMP SS-14 SS-13 MW-1

SS-39 SS-40 SS-41 SS-42 SS-43 SS-44 SS-45 SS-46 SS-47

SS-79

SS-66

WEST CONTROL BUILDING SS-48

SS-49 SS-50 SS-51 SS-52 SS-53 SS-54 SS-55 EAST CONTROL BUILDING SS-65

SS-68 SS-67

SS-20 SS-21 SS-22 SS-23 SS-24 SS-25 SS-26 **SS-82** SS-27 SS-28

SS-72 SS-69

SS-12 SS-11 SS-10 SS-09 SS-08 SS-07 SS-06 SS-05 SS-04 SS-03 SS-02 SS-01

E Main St

SS-71 SS-70

Excavation Areas to 6" depth
(July 2020)

N

0' 20' 40'
SCALE

DIGGERS HOTLINE
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Plotted By: joel.mackinney
Plot File Date Created: Jul/23/2020 6:12 PM
Filename: \\USMWK1FS0101\PROD\DATA\PROJECTS\60611431900_CAD_GIS\910 CAD\20-SHEETS\06_BLOUNT SOIL JULY2020.DWG

AECOM

PROJECT

ATC BLOUNT SUBSTATION RESPONSE AND CLEANUP
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REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER
60611431

DRAWING TITLE
PFAS SOIL REMOVAL AREAS

DRAWING NUMBER **SHEET NUMBER**
Figure 3

LEGEND

Water Samples

BLOUNT STREET

REYNOLDS PARK

WASHINGTON AVENUE

COMMERCIAL PROPERTY

BP GAS STATION

STORMCEPTOR

Surface Water

TRANSMISSION SUBSTATION

WEST CONTROL BUILDING

CONTROL BUILDING

CONTROL BUILDING

EAST CONTROL BUILDING

WCB Sump

Trans Sump

North Power Pole

MW-1
ETW-1

OIL MAIN & BLOUNT

MAIN STREET

BLOUNT GENERATING STATION

LIVINGSTON STREET

BNT-1
BNT-2
BNT-3
BNT-4
BNT-5
BNT-6
BNT-7
BNT-8
BNT-9
BNT-10

LVN-1
LVN-2
LVN-3
LVN-4
LVN-5
LVN-6
LVN-7
LVN-8
LVN-9

PRIVATE OUTLET

PRIVATE SAS

CONCRETE COLLAR

N
TN
0’ 75’ 150’
SCALE

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

Plotted By: joel.mackinney 3:35 PM
Plot File Date Created: Oct/15/2020
Filename: \\JSMWK1FS001\PROD\DATA\PROJECTS\60611431\900_CAD_GIS\910 CAD\20-SHEETS\FIG 3 JAN2020.DWG

AECOM

PROJECT

ATC BLOUNT SUBSTATION RESPONSE AND CLEANUP
MADISON, WISCONSIN

CLIENT

AMERICAN TRANSMISSION CO.
2 FEN OAK CT.
MADISON, WI 53718
(866) 899-3204 tel
www.atcllc.com

CONSULTANT

AECOM
1555 N RIVERCENTER DR.
MILWAUKEE, WI 53212
(414) 944-6080 tel
www.aecom.com

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

60611431

DRAWING TITLE

WATER SAMPLE LOCATIONS

DRAWING NUMBER **SHEET NUMBER**

FIGURE 4

Figure 5 - Soil PFAS Constituents for Removed Soil

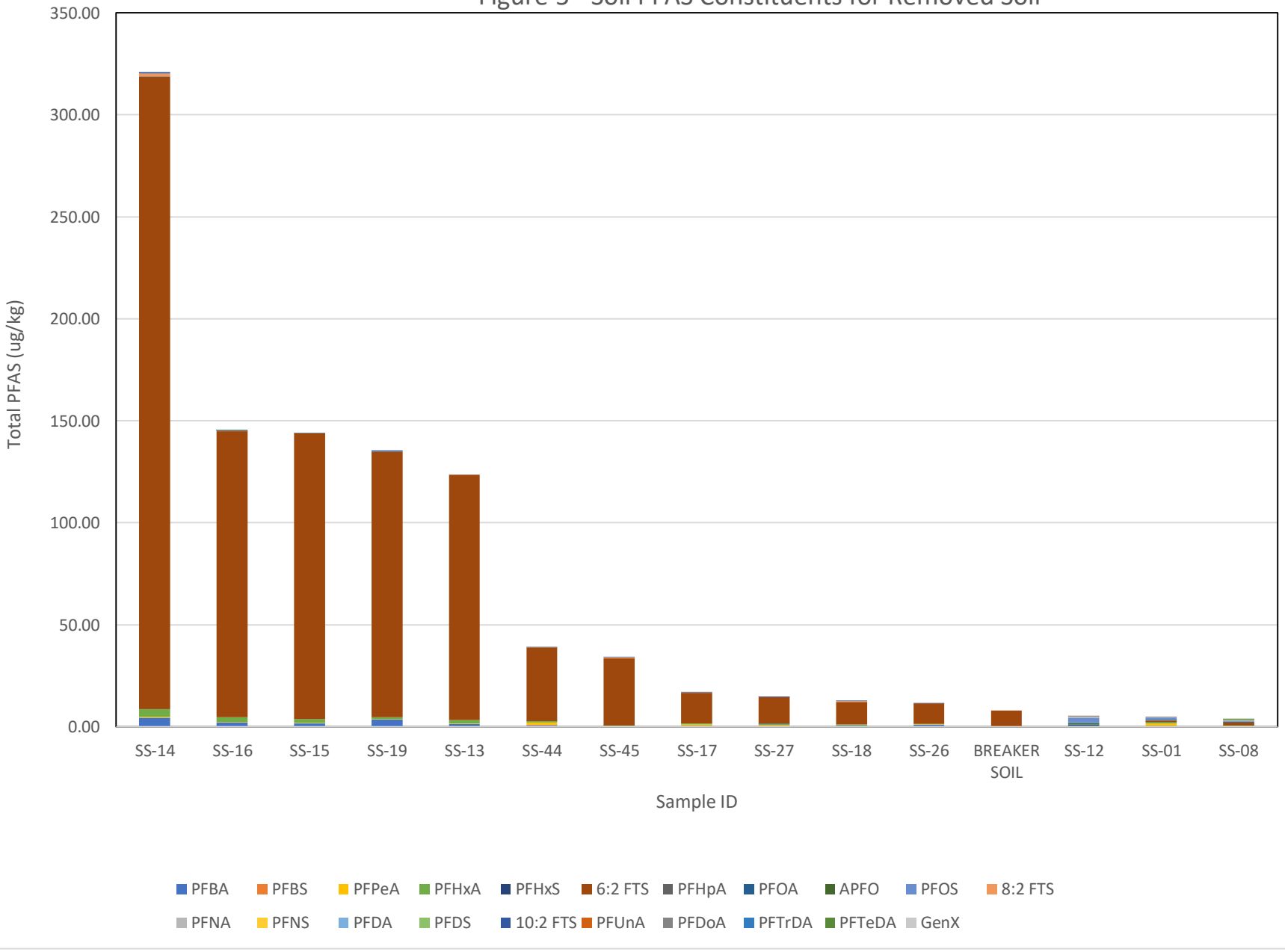


Figure 6 - Soil PFAS Constituents Inside Substation

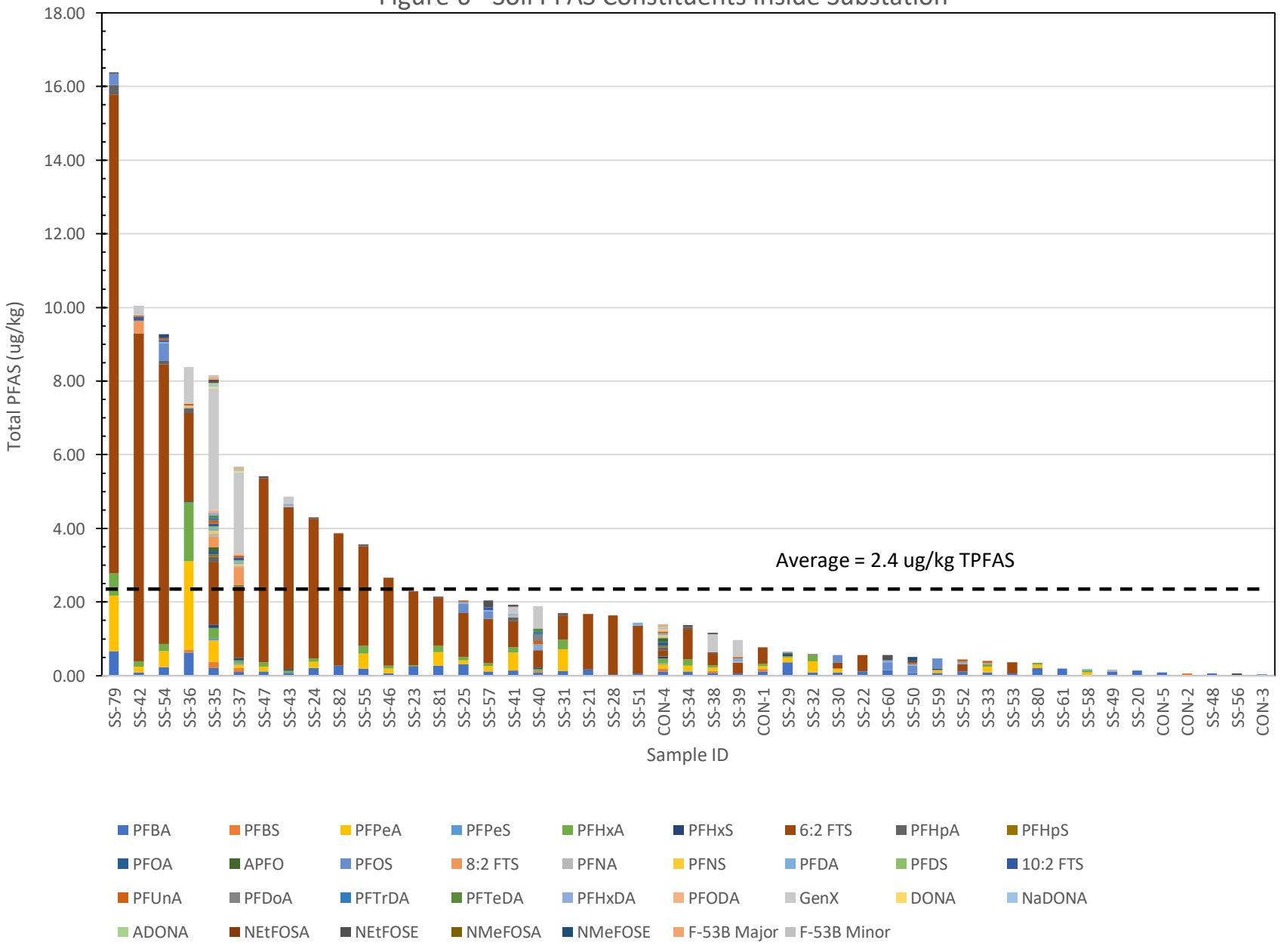


Figure 7 - Soil PFAS Constituents Outside Substation

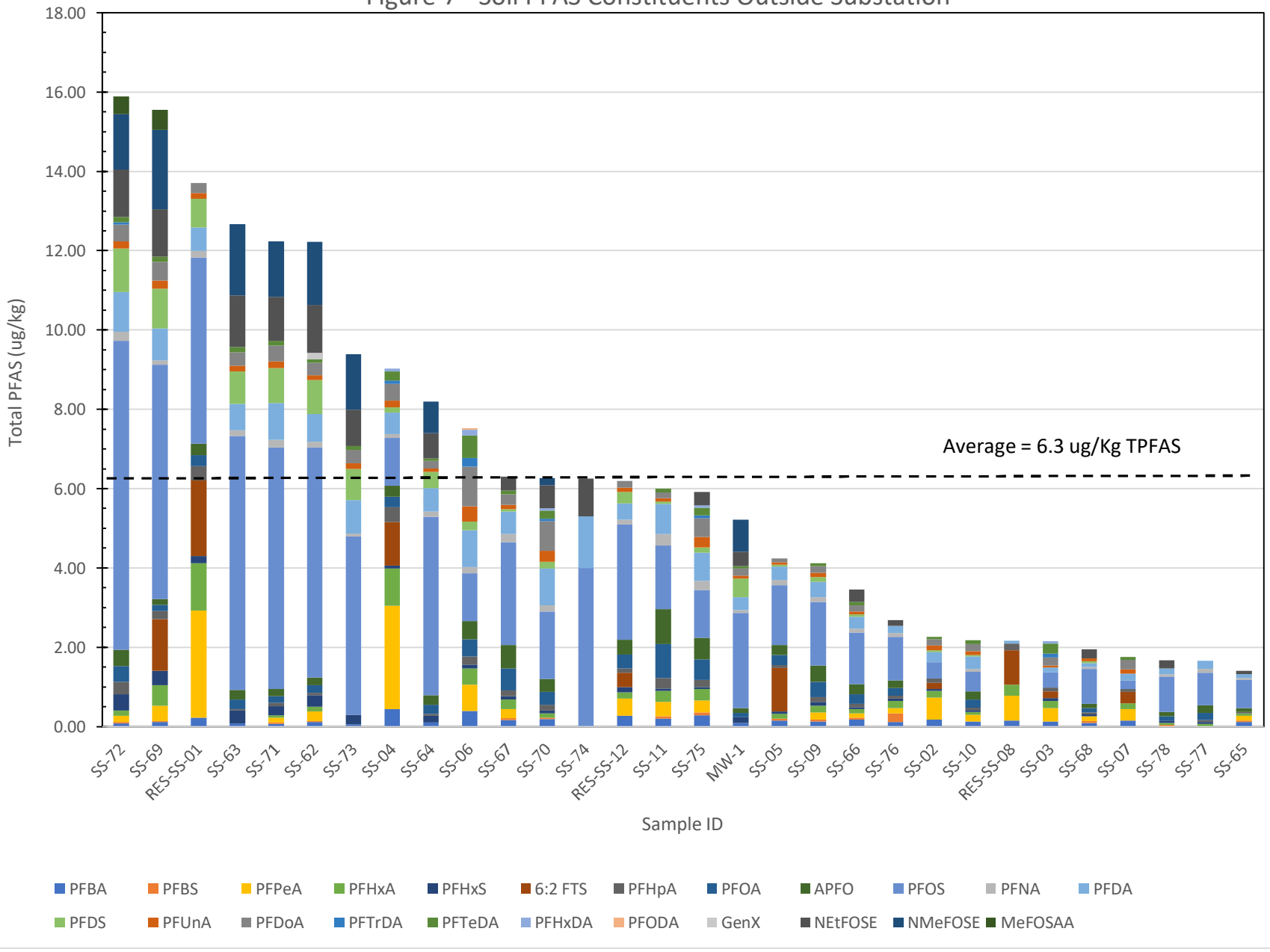


Figure 8 - PFAS in Water Samples (East)

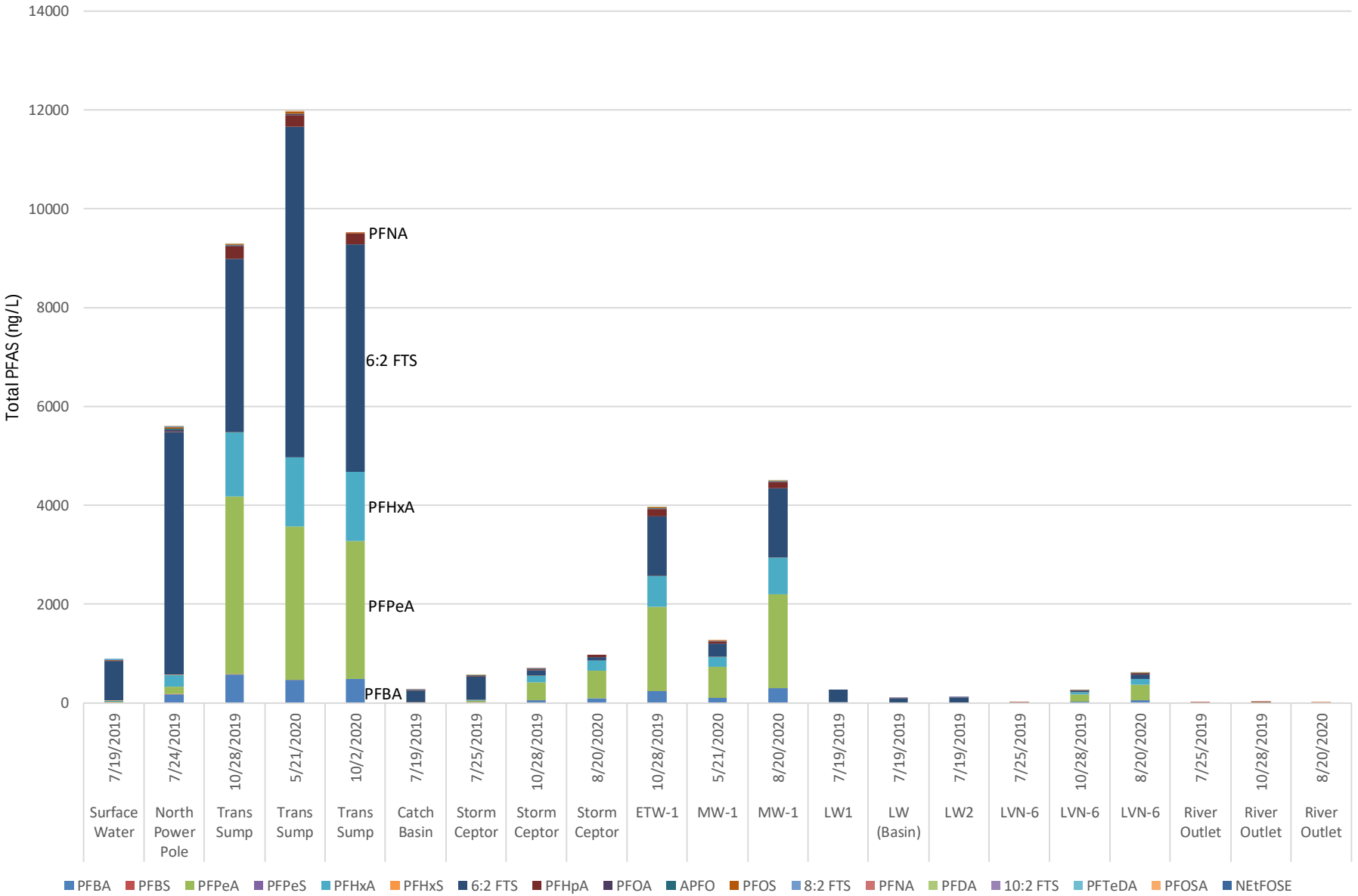


Figure 9 - PFAS in Water Samples (West)

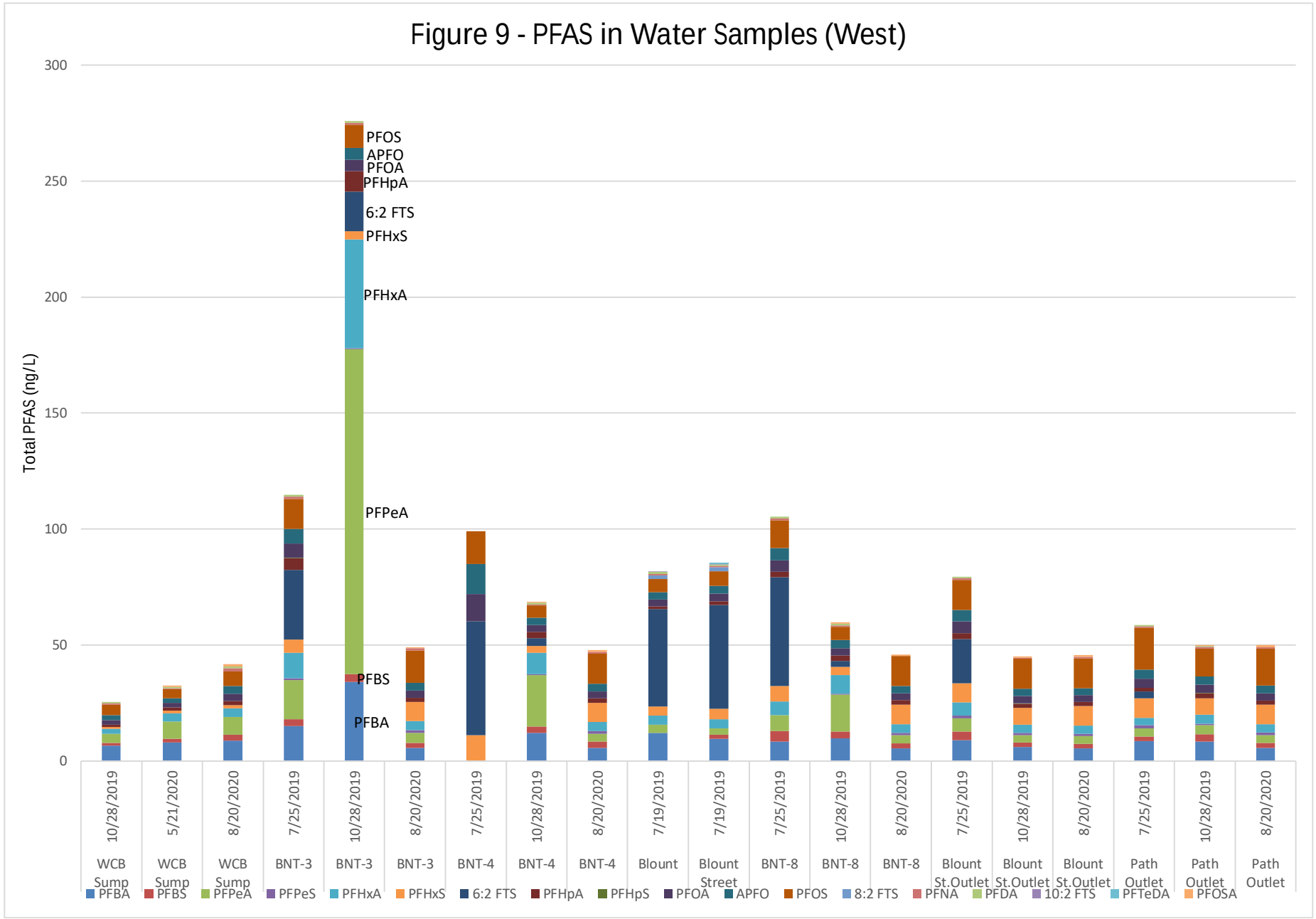


Figure 10 - Normalized PFAS in Water Samples (East)

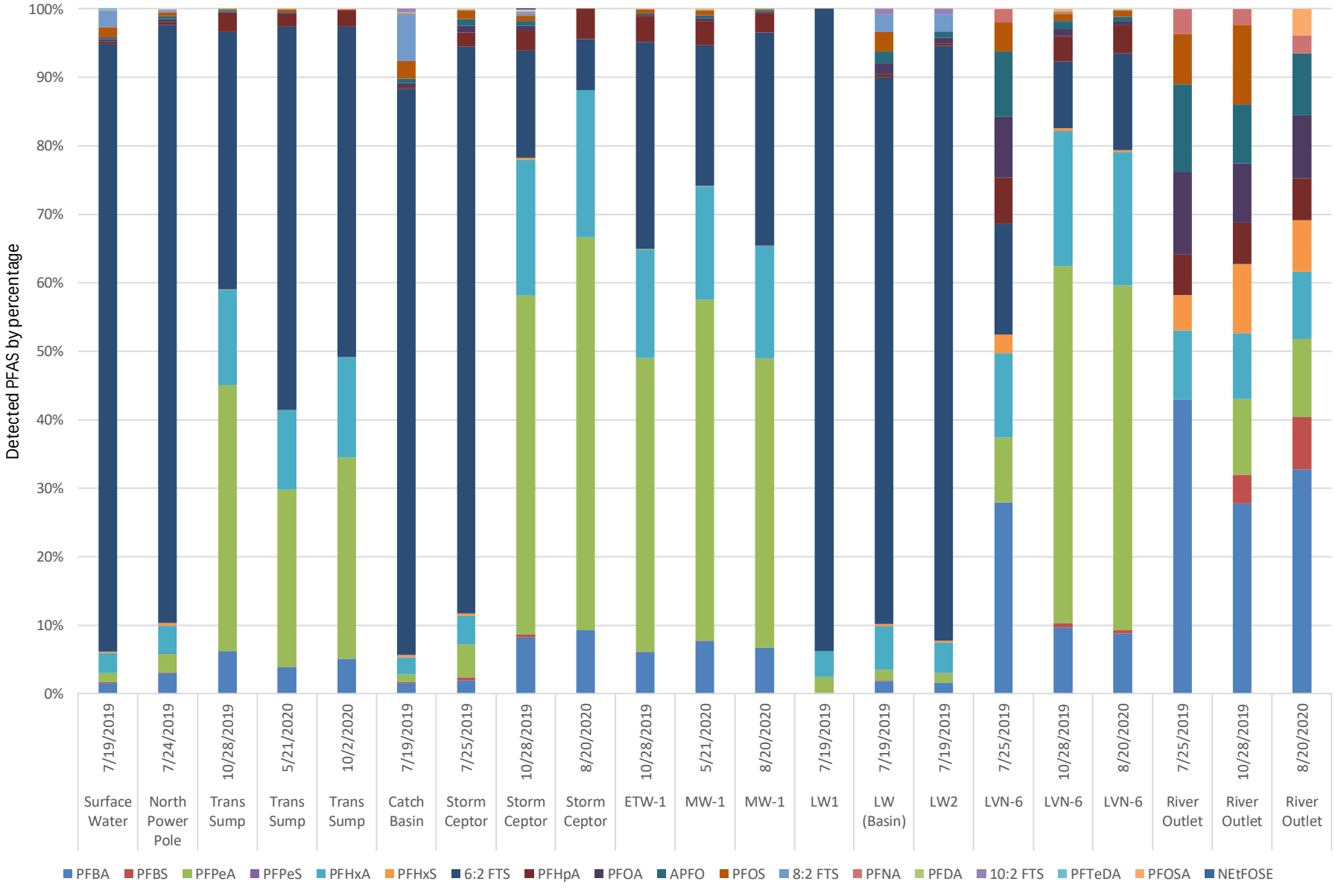
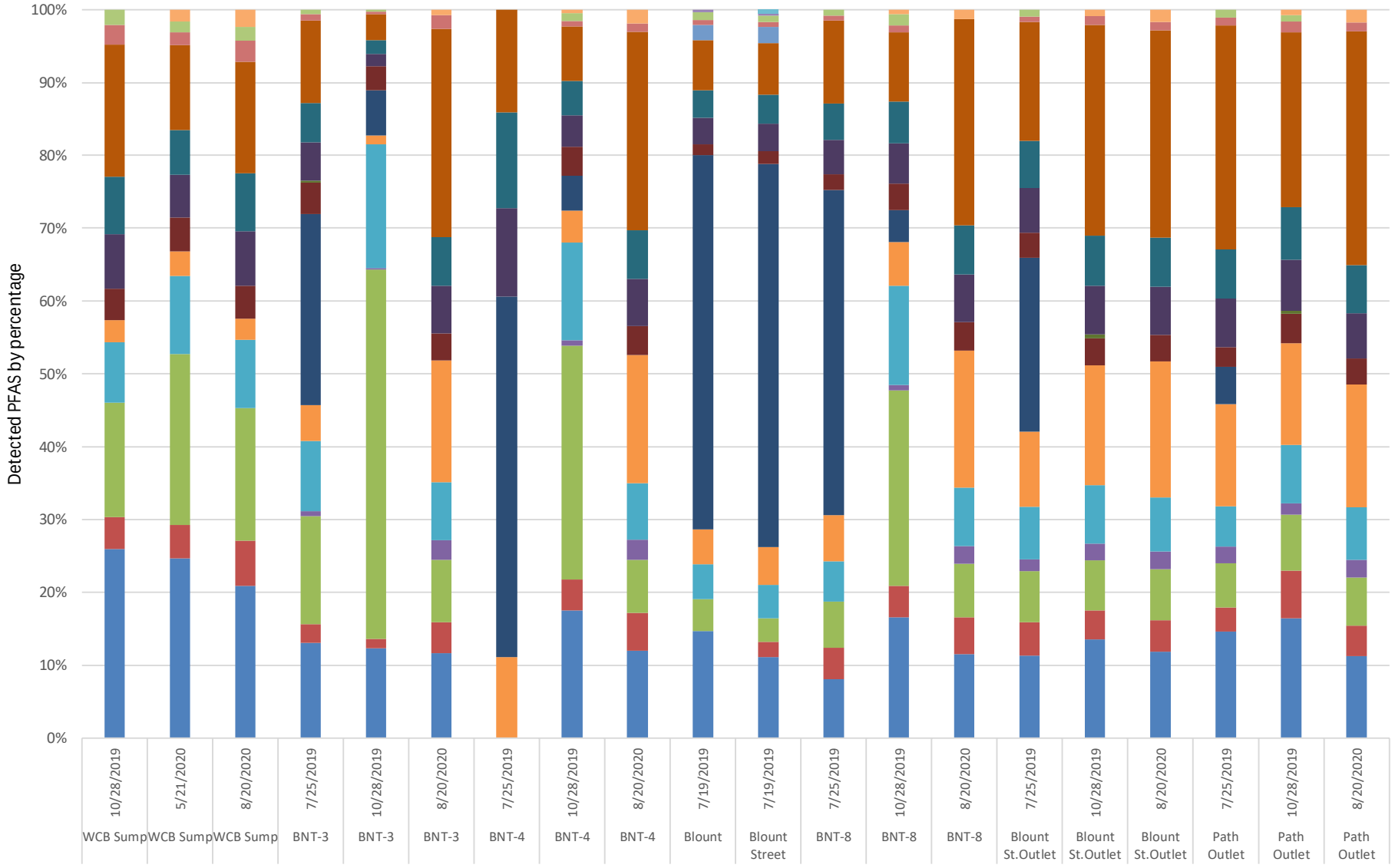


Figure 11- Normalized PFAS in Water Samples (West)



APPENDIX A – MONITORING WELL INSTALLATION DOCUMENTATION

Well Construction Form

AECOM

Facility/Project Name	Local Grid Location of Well	Well Name
ATC Blount Substation	ft N S ft E W	**MW-1**
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☑) or Well Location ☐	Wis. Unique Well No: **PK135** / DNR Well Id No.
	Lat. **43.080332** Long **-89.374427** or	
Facility ID	St. Plane ft N ft E S/C/N	Date Well Installed: **4 / 20 / 2020** (m m / d d / y y y y)
	Section Location of Waste/Source ☑ E	
Type of Well	NE 1/4 of SW of Sec. 13, T, 7 N, R 9 ☐	Well Installed By: Name (first, last) and Firm
Well Code ____ / ____	Location of Well relative to Waste/Source	Gov. Lot No.
Distance from Waste/ Source ____ ft. / Enf. Stds. Apply ☐	u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☑ Not Known	**Gage Kapugi** **On-Site Environmental Services**

A. Protective pipe, top elevation ft. MSL
B. Well casing, top elevation ft. MSL
C. Land surface elevation ft. MSL
D. Surface seal, bottom ft. MSL or ____ Ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☑ SW ☐ SP ☐
SM ☐ SC ☐ ML ☑ MH ☐ CL ☑ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☑ No

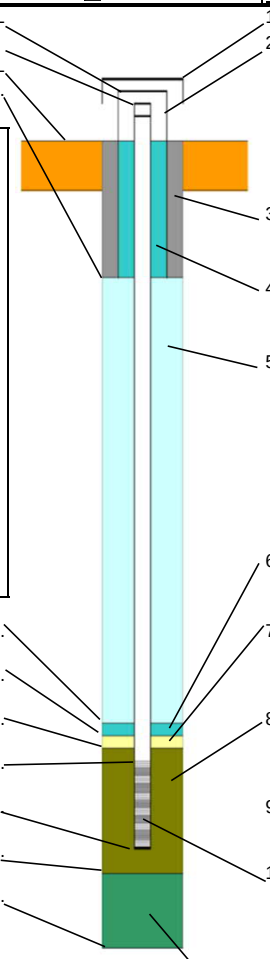
14 Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☑ 41
____. Other ☐ __.

15 Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☑ 99

16 Drilling additives used? ☐ Yes ☑ No
Describe ____.

17. Source of water (attach analysis, if required):
____

E Bentonite seal, top ____. ft. MSL 0.5 ft.
F. Fine sand, top ____. ft. MSL 3.0 ft.
G. Filter Pack, top ____. ft. MSL 3.5 ft.
H. Screen joint, top ____. ft. MSL 4.3 ft.
I. Well Bottom ____. ft. MSL 14.3 ft.
J. Filter Pack, bottom ____. ft. MSL 15. ft.
K. Borehole, bottom ____. ft. MSL 15.0 ft.
L. Borehole, diameter ____ In..
M. O.D. well casing ____. In..
N. I.D. well casing ____ In..



1. Cap and lock? ☑ Yes ☑ No
2. Protective cover pipe:
a. Inside diameter: 12 . In.
b. Length: 1. Ft.
c. Material: Steel ☑ 04
____. Other ☐ __.
d. Additional Protection? ☑ Yes ☐ No
If yes, describe: Concrete pad
3. Surface seal: Bentonite ☐ 30
Concrete ☐ 01
____ Other ☐ __.
4. material between well casing and protective pipe:
Bentonite ☑ 30
____ Other ☐ __.
5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. ____. Lbs/gal mud weight… Bentonite-sand slurry ☐ 35
c. ____. Lbs/gal mud weight… Bentonite slurry ☐ 31
d. ____.% Bentonite……. Bentonite-cement grout ☐ 50
e. bags . volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie Pumped ☐ 02
Gravity ☐ 08
6. Bentonite Seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☑ 3/8 in. ☐ 1/2 in. Bentonite Chips ☐ 32
c. 1 bag Other ☐ __.
7. Fine sand material:
Manufacturer, product name & mesh size
a. Fine sand 30/100 ☑ __.
b. Volume added 1/2 bag
8. Filter pack material:
Manufacturer, product name & mesh size
a. #5 sand ☑ __.
b. Volume added 7.5 bags .
9. Well casing: Flush threaded PVC schedule 40 ☑ 23
Flush threaded PVC schedule 80 ☐ 24
____. Other ☐ __.
☐ __.
10. Screen Material: PVC
a. screen type: Factory cut ☑ 11
Continuous slot ☐ 01
____. Other ☐ __.
b. Manufacturer Johnsons Screens
b. Slot size: .01 0.1 in.
c. slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☑ 14
Sand/slough Other ☐ __.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
Joel MacKinney	**AECOM** 1555 RiverCenter Drive, Suite 214, Milwaukee, Wisconsin, 53212

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
ATC Blount PFAS Investigation		MW-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Gage Kapugi On-site Environmental	4/20/2020	4/20/2020	hollow stem auger

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-1	Feet MSL	Feet MSL	2.00

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
NE 1/4 of SW 1/4 of Section 13, T 7 N, R 9 E
Lat 43 ° 4 ' 49.2"
Long 89 ° 22 ' 27.9"
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Dane	13	Madison

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1 GMAC	60 18		1.5	Topsoil, grass, roots, dark brown, moist	Topsoil			4.1						Began drilling at 0910
			3.0	1 piece black cinder/slag at 2 feet bgs Silty fine sand, light brown, moist, loose, trace fines 3/4 inch woven steel cable encountered at 3 to 4 feet bgs	SM			4						
2 GMAC	60 36		4.5 6.0	Gravel, wet, 80% gravel, 20% sand, loose, angular Water table at 4.5 feet bgs	GW			3.9						Strong odor from 5-15 feet
			7.5	Sandy silt, black, wet, odor	ML			506						
3 GMAC	60 48		9.0 10.5	Clay, light bluish gray with spots of dark brown/orange, moist to wet, medium plasticity, soft, 10% fine sand, trace silt Oily sheen observed on water from 10-15 feet bgs	CL			221.9 741						
			12.0 13.5	Clayey silt, light bluish gray, moist to wet, low plasticity, stiff, trace fine sand	ML			444.4 715.5						
			15.0	Fine sand with rounded gravel, gray, wet, dense, trace fines End of boring at 15 feet bgs Well screened from 4 to 14 feet bgs	SW			248						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	Tel:
Joel Machinery	AECOM	Fax:

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name	County Name	Well Name
ATC Blount Substation	Dane	MW-1

Facility License, Permit or Monitoring Number	County Code	Wisconsin Unique Well Number	DNR Well Number
	13	PK135	

1. Can this well be purged dry ? ☑ Yes ☐ No

2. Well development method

surged with bailer and bailed	☐	41
surged with bailer and pumped	☑	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
Other	☐	

3. Time spent developing well: 210 min.

4. Depth of well (from top of well casing): 13.94 ft.

5. Inside diameter of well: 2 in.

6. Volume of water in filter pack and well casing: 9.45 gal.

7. Volume of water removed from well: 17 gal.

8. Volume of water added (if any): gal.

9. Source of water added:

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	2.91 ft.	2.92 ft.
Date	b.	5/21/2020 (mm / dd / yyyy)	5/21/2020 (mm / dd / yyyy)
Time	c.	9:25 ☑ a.m. ☐ p.m.	12:00 ☐ a.m. ☑ p.m.
12. Sediment in well bottom		5.64 inches	0.0 inches
13. Water clarity		Clear ☐ 10 Turbid ☑ 15	Clear ☑ 20 Turbid ☐ 25
		(Describe) very turbid; dark brown and cloudy; slight sheen, odor	(Describe) clear with slight tint
14. Total suspended solids		mg/l	mg/l
15. COD		mg/l	mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Joel Last Name: MacKinney
Firm: AECOM

16. Additional comments on development:

Bailed approximately 12 gallons, then pumped
Odor similar to moth balls and slight sheen on water

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Last Name:
Facility/Firm: American Transmission Company, LLC
Street: W234 N2000 Ridgeview Parkway Court
City/State/Zip: Pewaukee, Wisconsin 53188

I hereby certify that the above information is correct and true to the best of my knowledge
Signature: Joel MacKinney
Print Name: Joel MacKinney
Firm: AECOM

NOTE: See instructions for more information including a list of county codes and well type codes

APPENDIX B – EUROFINS/TESTAMERICA LABORATORY REPORTS

Appendix B
Laboratory Report Submittals
ATC Blount SS-Environmental Emergency Spill Response
60611431; 722 E. Main Street Madison, WI 53703

Lab SDG Number	Sampled By	Submitted Date	Reported in:
320-52453-1	NSEC	9/19/2019	Preliminary Summary of Environmental Laboratory Data
320-52698-1	AECOM		
500-167039-1	NSEC		
500-167041-1	SCS		
500-167154-1	NSEC		
500-167225-1 (DRO)	AECOM		
500-167225-2 (PFAS)	AECOM		
500-167410-1	NSEC		
500-167417-1 (DRO)	AECOM		
500-167417-2 (PFAS)	AECOM		
500-167874-1	AECOM		
500-168051-1	AECOM		
1903574	AECOM	10/21/2019	Start-up Sampling Results, Fire Suppression Water Treatment System
500-171404-1	AECOM		
320-53858-1	AECOM	11/12/2019	Confirmation Soil Results for Containment Pit Area
1903838	AECOM	12/9/2019	Operation and Monitoring Summary, Fire Suppression Water Treatment System
320-55756-1	AECOM	2/4/2020	Interim Subsurface PFAS Investigation Results and Soil Removal Action
320-55814-1	AECOM		
320-55912-1	AECOM		
320-55913-1	AECOM		
320-60052-1	AECOM	6/10/2020	Interim Surface Soil PFAS Results and Groundwater RCL Discussion
320-60299-1	AECOM	11/1/2020	SI Report
320-61091-1	AECOM		
320-63888-1	AECOM		
320-65285-1	AECOM		
500-184788-1	AECOM		

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-60299-1
Client Project/Site: ATC - Madison 60611431

For:
AECOM
1350 Deming Way Suite 100
Middleton, Wisconsin 53562

Attn: Mr. Leo B Linnemanstons, P.G.

Sandie Fredrick

Authorized for release by:
4/23/2020 1:53:05 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

Table of Contents

Definitions/Glossary

Client: AECOM
Job ID: 320-60299-1
Project/Site: ATC - Madison 60611431

Qualifiers

LCMS

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

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)

Case Narrative

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

Job ID: 320-60299-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-60299-1

Comments
No additional comments.

Receipt
The samples were received on 4/21/2020 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6º C.

LCMS
Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS the following sample: EB-Auger (320-60299-1). 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 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-373929. 320-373929 Method: 3535 PFC-W

Method 3535: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: EB-Auger (320-60299-1) and EB-Well Screen (320-60299-2). 320-373929 Method: 3535 PFC-W

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: ATC - Madison 60611431

Job ID: 320-60299-1

Client Sample ID: EB-Auger — Lab Sample ID: 320-60299-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	0.80	J	2.0	0.59	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.32	J B	2.0	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.70	J B	2.0	0.36	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EB-Well Screen — Lab Sample ID: 320-60299-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.28	J B	2.0	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.79	J B	2.0	0.35	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

Client Sample ID: EB-Auger

Date Collected: 04/20/20 09:00
Date Received: 04/21/20 09:40

Lab Sample ID: 320-60299-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.36		2.0	0.36	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluoropentanoic acid (PFPeA)	<0.50		2.0	0.50	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorohexanoic acid (PFHxA)	**0.80**	**J**	2.0	0.59	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorooctanoic acid (PFOA)	<0.87		2.0	0.87	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorodecanoic acid (PFDA)	<0.32		2.0	0.32	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorododecanoic acid (PFDoA)	<0.56		2.0	0.56	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorotetradecanoic acid (PFTeA)	<0.30		2.0	0.30	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.91		2.0	0.91	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.47		2.0	0.47	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluoropentanesulfonic acid (PFPeS)	<0.31		2.0	0.31	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorohexanesulfonic acid (PFHxS)	**0.32**	**J B**	2.0	0.17	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorooctanesulfonic acid (PFOS)	<0.55		2.0	0.55	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorodecanesulfonic acid (PFDS)	<0.33		2.0	0.33	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorooctanesulfonamide (FOSA)	**0.70**	**J B**	2.0	0.36	ng/L		04/21/20 18:35	04/22/20 16:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.2		20	3.2	ng/L		04/21/20 18:35	04/22/20 16:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		04/21/20 18:35	04/22/20 16:08	1
4:2 FTS	<5.3		20	5.3	ng/L		04/21/20 18:35	04/22/20 16:08	1
6:2 FTS	<2.0		20	2.0	ng/L		04/21/20 18:35	04/22/20 16:08	1
8:2 FTS	<2.0		20	2.0	ng/L		04/21/20 18:35	04/22/20 16:08	1
10:2 FTS	<0.19		2.0	0.19	ng/L		04/21/20 18:35	04/22/20 16:08	1
NEtFOSA	<0.89		2.0	0.89	ng/L		04/21/20 18:35	04/22/20 16:08	1
NMeFOSA	<0.44		2.0	0.44	ng/L		04/21/20 18:35	04/22/20 16:08	1
Perfluorododecanesulfonic acid (PFDoS)	<0.46		2.0	0.46	ng/L		04/21/20 18:35	04/22/20 16:08	1
NMeFOSE	<1.4		4.1	1.4	ng/L		04/21/20 18:35	04/22/20 16:08	1
NEtFOSE	<0.87		2.0	0.87	ng/L		04/21/20 18:35	04/22/20 16:08	1
ADONA	<0.19		2.1	0.19	ng/L		04/21/20 18:35	04/22/20 16:08	1
F-53B Major	<0.24		2.0	0.24	ng/L		04/21/20 18:35	04/22/20 16:08	1
HFPO-DA (GenX)	<1.5		4.1	1.5	ng/L		04/21/20 18:35	04/22/20 16:08	1
F-53B Minor	<0.33		2.0	0.33	ng/L		04/21/20 18:35	04/22/20 16:08	1
NaDONA	<0.19		2.1	0.19	ng/L		04/21/20 18:35	04/22/20 16:08	1
DONA	<0.18		2.0	0.18	ng/L		04/21/20 18:35	04/22/20 16:08	1
Ammonium Perfluorooctanoate (APFO)	<0.90		2.1	0.90	ng/L		04/21/20 18:35	04/22/20 16:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*101*		*25 - 150*	*04/21/20 18:35*	*04/22/20 16:08*	*1*
13C5 PFPeA	*94*		*25 - 150*	*04/21/20 18:35*	*04/22/20 16:08*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

Client Sample ID: EB-Auger
Date Collected: 04/20/20 09:00
Date Received: 04/21/20 09:40

Lab Sample ID: 320-60299-1
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	98		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C4 PFHpA	97		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C4 PFOA	96		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C5 PFNA	100		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C2 PFDA	85		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C2 PFHxDA	65		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C2 PFUnA	66		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C2 PFDoA	35		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C2 PFTeDA	80		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C3 PFBS	102		25 - 150	04/21/20 18:35	04/22/20 16:08	1
18O2 PFHxS	104		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C4 PFOS	110		25 - 150	04/21/20 18:35	04/22/20 16:08	1
13C8 FOSA	108		25 - 150	04/21/20 18:35	04/22/20 16:08	1
d3-NMeFOSAA	53		25 - 150	04/21/20 18:35	04/22/20 16:08	1
d5-NEtFOSAA	81		25 - 150	04/21/20 18:35	04/22/20 16:08	1
M2-6:2 FTS	135		25 - 150	04/21/20 18:35	04/22/20 16:08	1
M2-8:2 FTS	152	*5	25 - 150	04/21/20 18:35	04/22/20 16:08	1
M2-4:2 FTS	116		25 - 150	04/21/20 18:35	04/22/20 16:08	1
d-N-MeFOSA-M	86		20 - 150	04/21/20 18:35	04/22/20 16:08	1
d-N-EtFOSA-M	58		20 - 150	04/21/20 18:35	04/22/20 16:08	1
d7-N-MeFOSE-M	48		10 - 120	04/21/20 18:35	04/22/20 16:08	1
d9-N-EtFOSE-M	34		10 - 120	04/21/20 18:35	04/22/20 16:08	1
13C3 HFPO-DA	99		25 - 150	04/21/20 18:35	04/22/20 16:08	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

Client Sample ID: EB-Well Screen

Date Collected: 04/20/20 10:00
Date Received: 04/21/20 09:40

Lab Sample ID: 320-60299-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.35		2.0	0.35	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluoropentanoic acid (PFPeA)	<0.50		2.0	0.50	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorohexanoic acid (PFHxA)	<0.59		2.0	0.59	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorooctanoic acid (PFOA)	<0.86		2.0	0.86	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorododecanoic acid (PFDoA)	<0.56		2.0	0.56	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorotetradecanoic acid (PFTeA)	<0.29		2.0	0.29	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.90		2.0	0.90	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.47		2.0	0.47	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorohexanesulfonic acid (PFHxS)	**0.28**	**J B**	2.0	0.17	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorooctanesulfonic acid (PFOS)	<0.55		2.0	0.55	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorooctanesulfonamide (FOSA)	**0.79**	**J B**	2.0	0.35	ng/L		04/21/20 18:35	04/22/20 16:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.1		20	3.1	ng/L		04/21/20 18:35	04/22/20 16:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		04/21/20 18:35	04/22/20 16:17	1
4:2 FTS	<5.3		20	5.3	ng/L		04/21/20 18:35	04/22/20 16:17	1
6:2 FTS	<2.0		20	2.0	ng/L		04/21/20 18:35	04/22/20 16:17	1
8:2 FTS	<2.0		20	2.0	ng/L		04/21/20 18:35	04/22/20 16:17	1
10:2 FTS	<0.19		2.0	0.19	ng/L		04/21/20 18:35	04/22/20 16:17	1
NEtFOSA	<0.88		2.0	0.88	ng/L		04/21/20 18:35	04/22/20 16:17	1
NMeFOSA	<0.44		2.0	0.44	ng/L		04/21/20 18:35	04/22/20 16:17	1
Perfluorododecanesulfonic acid (PFDoS)	<0.46		2.0	0.46	ng/L		04/21/20 18:35	04/22/20 16:17	1
NMeFOSE	<1.4		4.0	1.4	ng/L		04/21/20 18:35	04/22/20 16:17	1
NEtFOSE	<0.86		2.0	0.86	ng/L		04/21/20 18:35	04/22/20 16:17	1
ADONA	<0.19		2.1	0.19	ng/L		04/21/20 18:35	04/22/20 16:17	1
F-53B Major	<0.24		2.0	0.24	ng/L		04/21/20 18:35	04/22/20 16:17	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		04/21/20 18:35	04/22/20 16:17	1
F-53B Minor	<0.32		2.0	0.32	ng/L		04/21/20 18:35	04/22/20 16:17	1
NaDONA	<0.19		2.1	0.19	ng/L		04/21/20 18:35	04/22/20 16:17	1
DONA	<0.18		2.0	0.18	ng/L		04/21/20 18:35	04/22/20 16:17	1
Ammonium Perfluorooctanoate (APFO)	<0.89		2.1	0.89	ng/L		04/21/20 18:35	04/22/20 16:17	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*102*		*25 - 150*	*04/21/20 18:35*	*04/22/20 16:17*	*1*
13C5 PFPeA	*94*		*25 - 150*	*04/21/20 18:35*	*04/22/20 16:17*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

Client Sample ID: EB-Well Screen
Date Collected: 04/20/20 10:00
Date Received: 04/21/20 09:40

Lab Sample ID: 320-60299-2
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	95		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C4 PFHpA	97		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C4 PFOA	91		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C5 PFNA	86		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C2 PFDA	86		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C2 PFHxDA	70		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C2 PFUnA	89		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C2 PFDoA	80		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C2 PFTeDA	82		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C3 PFBS	103		25 - 150	04/21/20 18:35	04/22/20 16:17	1
18O2 PFHxS	105		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C4 PFOS	112		25 - 150	04/21/20 18:35	04/22/20 16:17	1
13C8 FOSA	100		25 - 150	04/21/20 18:35	04/22/20 16:17	1
d3-NMeFOSAA	95		25 - 150	04/21/20 18:35	04/22/20 16:17	1
d5-NEtFOSAA	101		25 - 150	04/21/20 18:35	04/22/20 16:17	1
M2-6:2 FTS	128		25 - 150	04/21/20 18:35	04/22/20 16:17	1
M2-8:2 FTS	128		25 - 150	04/21/20 18:35	04/22/20 16:17	1
M2-4:2 FTS	115		25 - 150	04/21/20 18:35	04/22/20 16:17	1
d-N-MeFOSA-M	90		20 - 150	04/21/20 18:35	04/22/20 16:17	1
d-N-EtFOSA-M	89		20 - 150	04/21/20 18:35	04/22/20 16:17	1
d7-N-MeFOSE-M	52		10 - 120	04/21/20 18:35	04/22/20 16:17	1
d9-N-EtFOSE-M	50		10 - 120	04/21/20 18:35	04/22/20 16:17	1
13C3 HFPO-DA	99		25 - 150	04/21/20 18:35	04/22/20 16:17	1

Isotope Dilution Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

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)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFHxDA (25-150)
320-60299-1	EB-Auger	101	94	98	97	96	100	85	65
320-60299-2	EB-Well Screen	102	94	95	97	91	86	86	70
LCS 320-373929/2-A	Lab Control Sample	100	94	96	94	93	92	82	73
LCSD 320-373929/3-A	Lab Control Sample Dup	100	93	96	99	95	90	82	73
MB 320-373929/1-A	Method Blank	102	98	95	99	92	95	90	66

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
320-60299-1	EB-Auger	66	35	80	102	104	110	108	53
320-60299-2	EB-Well Screen	89	80	82	103	105	112	100	95
LCS 320-373929/2-A	Lab Control Sample	98	84	79	103	105	111	101	98
LCSD 320-373929/3-A	Lab Control Sample Dup	87	80	76	102	102	111	101	98
MB 320-373929/1-A	Method Blank	97	85	73	106	110	114	106	101

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)
320-60299-1	EB-Auger	81	135	152 *5	116	86	58	48	34
320-60299-2	EB-Well Screen	101	128	128	115	90	89	52	50
LCS 320-373929/2-A	Lab Control Sample	100	120	120	114	88	86	62	63
LCSD 320-373929/3-A	Lab Control Sample Dup	98	116	116	108	89	88	71	67
MB 320-373929/1-A	Method Blank	110	132	126	119	96	95	64	70

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
320-60299-1	EB-Auger	99
320-60299-2	EB-Well Screen	99
LCS 320-373929/2-A	Lab Control Sample	98
LCSD 320-373929/3-A	Lab Control Sample Dup	95
MB 320-373929/1-A	Method Blank	101

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFHxDA = 13C2 PFHxDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS

Isotope Dilution Summary

Client: AECOM
Job ID: 320-60299-1
Project/Site: ATC - Madison 60611431

M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-373929/1-A
Matrix: Water
Analysis Batch: 374077

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 373929

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.35		2.0	0.35	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorotetradecanoic acid (PFTeA)	0.309	J	2.0	0.29	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.46		2.0	0.46	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorohexanesulfonic acid (PFHxS)	0.291	J	2.0	0.17	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorooctanesulfonamide (FOSA)	0.671	J	2.0	0.35	ng/L		04/21/20 18:35	04/22/20 15:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.1		20	3.1	ng/L		04/21/20 18:35	04/22/20 15:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		04/21/20 18:35	04/22/20 15:41	1
4:2 FTS	<5.2		20	5.2	ng/L		04/21/20 18:35	04/22/20 15:41	1
6:2 FTS	<2.0		20	2.0	ng/L		04/21/20 18:35	04/22/20 15:41	1
8:2 FTS	<2.0		20	2.0	ng/L		04/21/20 18:35	04/22/20 15:41	1
10:2 FTS	<0.19		2.0	0.19	ng/L		04/21/20 18:35	04/22/20 15:41	1
NEtFOSA	<0.87		2.0	0.87	ng/L		04/21/20 18:35	04/22/20 15:41	1
NMeFOSA	<0.43		2.0	0.43	ng/L		04/21/20 18:35	04/22/20 15:41	1
Perfluorododecanesulfonic acid (PFDoS)	<0.45		2.0	0.45	ng/L		04/21/20 18:35	04/22/20 15:41	1
NMeFOSE	<1.4		4.0	1.4	ng/L		04/21/20 18:35	04/22/20 15:41	1
NEtFOSE	<0.85		2.0	0.85	ng/L		04/21/20 18:35	04/22/20 15:41	1
ADONA	<0.19		2.1	0.19	ng/L		04/21/20 18:35	04/22/20 15:41	1
F-53B Major	<0.24		2.0	0.24	ng/L		04/21/20 18:35	04/22/20 15:41	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		04/21/20 18:35	04/22/20 15:41	1
F-53B Minor	<0.32		2.0	0.32	ng/L		04/21/20 18:35	04/22/20 15:41	1
NaDONA	<0.19		2.1	0.19	ng/L		04/21/20 18:35	04/22/20 15:41	1
DONA	<0.18		2.0	0.18	ng/L		04/21/20 18:35	04/22/20 15:41	1
Ammonium Perfluorooctanoate (APFO)	<0.88		2.1	0.88	ng/L		04/21/20 18:35	04/22/20 15:41	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*102*		*25 - 150*	*04/21/20 18:35*	*04/22/20 15:41*	*1*

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

Lab Sample ID: MB 320-373929/1-A
Matrix: Water
Analysis Batch: 374077

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 373929

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	98		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C2 PFHxA	95		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C4 PFHpA	99		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C4 PFOA	92		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C5 PFNA	95		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C2 PFDA	90		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C2 PFHxDA	66		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C2 PFUnA	97		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C2 PFDoA	85		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C2 PFTeDA	73		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C3 PFBS	106		25 - 150	04/21/20 18:35	04/22/20 15:41	1
18O2 PFHxS	110		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C4 PFOS	114		25 - 150	04/21/20 18:35	04/22/20 15:41	1
13C8 FOSA	106		25 - 150	04/21/20 18:35	04/22/20 15:41	1
d3-NMeFOSAA	101		25 - 150	04/21/20 18:35	04/22/20 15:41	1
d5-NEtFOSAA	110		25 - 150	04/21/20 18:35	04/22/20 15:41	1
M2-6:2 FTS	132		25 - 150	04/21/20 18:35	04/22/20 15:41	1
M2-8:2 FTS	126		25 - 150	04/21/20 18:35	04/22/20 15:41	1
M2-4:2 FTS	119		25 - 150	04/21/20 18:35	04/22/20 15:41	1
d-N-MeFOSA-M	96		20 - 150	04/21/20 18:35	04/22/20 15:41	1
d-N-EtFOSA-M	95		20 - 150	04/21/20 18:35	04/22/20 15:41	1
d7-N-MeFOSE-M	64		10 - 120	04/21/20 18:35	04/22/20 15:41	1
d9-N-EtFOSE-M	70		10 - 120	04/21/20 18:35	04/22/20 15:41	1
13C3 HFPO-DA	101		25 - 150	04/21/20 18:35	04/22/20 15:41	1

Lab Sample ID: LCS 320-373929/2-A
Matrix: Water
Analysis Batch: 374077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 373929

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	38.4		ng/L		96	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	40.4		ng/L		101	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	40.2		ng/L		100	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	41.6		ng/L		104	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	38.4		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	40.0	42.3		ng/L		106	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	43.6		ng/L		109	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	29.8		ng/L		75	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	40.9		ng/L		102	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	38.1		ng/L		95	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	44.2		ng/L		111	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	50.1		ng/L		125	76 - 136
Perfluorobutanesulfonic acid (PFBS)	35.4	36.0		ng/L		102	67 - 127
Perfluoro-n-octadecanoic acid (PFODA)	40.0	31.1		ng/L		78	58 - 145

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

Lab Sample ID: LCS 320-373929/2-A
Matrix: Water
Analysis Batch: 374077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 373929

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanesulfonic acid (PFPeS)	37.5	38.8		ng/L		103	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.6		ng/L		98	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.0		ng/L		102	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	36.9		ng/L		99	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	38.0		ng/L		99	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	40.0		ng/L		104	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	40.1		ng/L		100	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.7		ng/L		102	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.6		ng/L		99	76 - 136
4:2 FTS	37.4	34.1		ng/L		91	79 - 139
6:2 FTS	37.9	38.2		ng/L		101	59 - 175
8:2 FTS	38.3	36.1		ng/L		94	75 - 135
10:2 FTS	38.6	38.2		ng/L		99	64 - 142
NMeFOSA	40.0	41.1		ng/L		103	67 - 154
Perfluorododecanesulfonic acid (PFDoS)	38.7	36.3		ng/L		94	67 - 127
NMeFOSE	40.0	46.3		ng/L		116	70 - 130
NEtFOSE	40.0	40.0		ng/L		100	71 - 131
ADONA	39.5	35.6		ng/L		90	79 - 139
F-53B Major	37.3	33.7		ng/L		90	75 - 135
HFPO-DA (GenX)	40.0	39.9		ng/L		100	51 - 173
F-53B Minor	37.7	33.2		ng/L		88	54 - 114
NaDONA	40.0	36.0		ng/L		90	79 - 139
DONA	37.7	33.9		ng/L		90	79 - 139
Ammonium Perfluorooctanoate (APFO)	41.6	39.9		ng/L		96	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*100*		*25 - 150*
13C5 PFPeA	*94*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*94*		*25 - 150*
13C4 PFOA	*93*		*25 - 150*
13C5 PFNA	*92*		*25 - 150*
13C2 PFDA	*82*		*25 - 150*
13C2 PFHxDA	*73*		*25 - 150*
13C2 PFUnA	*98*		*25 - 150*
13C2 PFDoA	*84*		*25 - 150*
13C2 PFTeDA	*79*		*25 - 150*
13C3 PFBS	*103*		*25 - 150*
18O2 PFHxS	*105*		*25 - 150*
13C4 PFOS	*111*		*25 - 150*

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

Lab Sample ID: LCS 320-373929/2-A
Matrix: Water
Analysis Batch: 374077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 373929

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	101		25 - 150
d3-NMeFOSAA	98		25 - 150
d5-NEtFOSAA	100		25 - 150
M2-6:2 FTS	120		25 - 150
M2-8:2 FTS	120		25 - 150
M2-4:2 FTS	114		25 - 150
d-N-MeFOSA-M	88		20 - 150
d-N-EtFOSA-M	86		20 - 150
d7-N-MeFOSE-M	62		10 - 120
d9-N-EtFOSE-M	63		10 - 120
13C3 HFPO-DA	98		25 - 150

Lab Sample ID: LCSD 320-373929/3-A
Matrix: Water
Analysis Batch: 374077

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 373929

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	38.0		ng/L		95	76 - 136	1	30
Perfluoropentanoic acid (PFPeA)			40.0	41.0		ng/L		102	71 - 131	1	30
Perfluorohexanoic acid (PFHxA)			40.0	40.1		ng/L		100	73 - 133	0	30
Perfluoroheptanoic acid (PFHpA)			40.0	40.8		ng/L		102	72 - 132	2	30
Perfluorooctanoic acid (PFOA)			40.0	39.5		ng/L		99	70 - 130	3	30
Perfluorononanoic acid (PFNA)			40.0	42.4		ng/L		106	75 - 135	0	30
Perfluorodecanoic acid (PFDA)			40.0	41.0		ng/L		103	76 - 136	6	30
Perfluoroundecanoic acid (PFUnA)			40.0	36.0		ng/L		90	68 - 128	19	30
Perfluorododecanoic acid (PFDoA)			40.0	41.9		ng/L		105	71 - 131	2	30
Perfluorotridecanoic acid (PFTriA)			40.0	42.8		ng/L		107	71 - 131	12	30
Perfluorotetradecanoic acid (PFTeA)			40.0	42.3		ng/L		106	70 - 130	4	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			40.0	42.8		ng/L		107	76 - 136	16	30
Perfluorobutanesulfonic acid (PFBS)			35.4	34.6		ng/L		98	67 - 127	4	30
Perfluoro-n-octadecanoic acid (PFODA)			40.0	31.1		ng/L		78	58 - 145	0	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	37.7		ng/L		101	66 - 126	3	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	35.3		ng/L		97	59 - 119	1	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	37.2		ng/L		98	76 - 136	5	30
Perfluorooctanesulfonic acid (PFOS)			37.1	35.9		ng/L		97	70 - 130	3	30
Perfluorononanesulfonic acid (PFNS)			38.4	38.3		ng/L		100	75 - 135	1	30
Perfluorodecanesulfonic acid (PFDS)			38.6	36.8		ng/L		95	71 - 131	8	30
Perfluorooctanesulfonamide (FOSA)			40.0	39.2		ng/L		98	73 - 133	2	30

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

Lab Sample ID: LCSD 320-373929/3-A
Matrix: Water
Analysis Batch: 374077

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 373929

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	40.0		ng/L		100	76 - 136	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	38.1		ng/L		95	76 - 136	4	30
4:2 FTS			37.4	34.3		ng/L		92	79 - 139	1	30
6:2 FTS			37.9	39.3		ng/L		104	59 - 175	3	30
8:2 FTS			38.3	36.8		ng/L		96	75 - 135	2	30
10:2 FTS			38.6	34.8		ng/L		90	64 - 142	9	30
NMeFOSA			40.0	40.3		ng/L		101	67 - 154	2	30
Perfluorododecanesulfonic acid (PFDoS)			38.7	34.4		ng/L		89	67 - 127	5	30
NMeFOSE			40.0	43.3		ng/L		108	70 - 130	7	30
NEtFOSE			40.0	40.3		ng/L		101	71 - 131	1	30
ADONA			39.5	35.5		ng/L		90	79 - 139	0	30
F-53B Major			37.3	33.6		ng/L		90	75 - 135	0	30
HFPO-DA (GenX)			40.0	41.5		ng/L		104	51 - 173	4	30
F-53B Minor			37.7	33.2		ng/L		88	54 - 114	0	30
NaDONA			40.0	35.9		ng/L		90	79 - 139	0	30
DONA			37.7	33.8		ng/L		90	79 - 139	0	30
Ammonium Perfluorooctanoate (APFO)			41.6	41.1		ng/L		99	70 - 130	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*100*		*25 - 150*
13C5 PFPeA	*93*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*99*		*25 - 150*
13C4 PFOA	*95*		*25 - 150*
13C5 PFNA	*90*		*25 - 150*
13C2 PFDA	*82*		*25 - 150*
13C2 PFHxDA	*73*		*25 - 150*
13C2 PFUnA	*87*		*25 - 150*
13C2 PFDoA	*80*		*25 - 150*
13C2 PFTeDA	*76*		*25 - 150*
13C3 PFBS	*102*		*25 - 150*
18O2 PFHxS	*102*		*25 - 150*
13C4 PFOS	*111*		*25 - 150*
13C8 FOSA	*101*		*25 - 150*
d3-NMeFOSAA	*98*		*25 - 150*
d5-NEtFOSAA	*98*		*25 - 150*
M2-6:2 FTS	*116*		*25 - 150*
M2-8:2 FTS	*116*		*25 - 150*
M2-4:2 FTS	*108*		*25 - 150*
d-N-MeFOSA-M	*89*		*20 - 150*
d-N-EtFOSA-M	*88*		*20 - 150*
d7-N-MeFOSE-M	*71*		*10 - 120*
d9-N-EtFOSE-M	*67*		*10 - 120*
13C3 HFPO-DA	*95*		*25 - 150*

QC Association Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

LCMS

Prep Batch: 373929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60299-1	EB-Auger	Total/NA	Water	3535	
320-60299-2	EB-Well Screen	Total/NA	Water	3535	
MB 320-373929/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-373929/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-373929/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 374077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60299-1	EB-Auger	Total/NA	Water	537 (modified)	373929
320-60299-2	EB-Well Screen	Total/NA	Water	537 (modified)	373929
MB 320-373929/1-A	Method Blank	Total/NA	Water	537 (modified)	373929
LCS 320-373929/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	373929
LCSD 320-373929/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	373929

Lab Chronicle

Client: AECOM
Job ID: 320-60299-1
Project/Site: ATC - Madison 60611431

Client Sample ID: EB-Auger
Lab Sample ID: 320-60299-1
Date Collected: 04/20/20 09:00
Matrix: Water
Date Received: 04/21/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			245.6 mL	10.0 mL	373929	04/21/20 18:35	PV	TAL SAC
Total/NA	Analysis	537 (modified)		1			374077	04/22/20 16:08	S1M	TAL SAC

Client Sample ID: EB-Well Screen
Lab Sample ID: 320-60299-2
Date Collected: 04/20/20 10:00
Matrix: Water
Date Received: 04/21/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			247.1 mL	10.0 mL	373929	04/21/20 18:35	PV	TAL SAC
Total/NA	Analysis	537 (modified)		1			374077	04/22/20 16:17	S1M	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 320-60299-1
Project/Site: ATC - Madison 60611431

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-22
Michigan	State	9947	01-29-20 *
Nevada	State	CA000442020-1	07-31-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-21
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-21
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-21
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-20
Wyoming	State Program	8TMS-L	01-28-19 *

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
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 SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-60299-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-60299-1	EB-Auger	Water	04/20/20 09:00	04/21/20 09:40	
320-60299-2	EB-Well Screen	Water	04/20/20 10:00	04/21/20 09:40	

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler: Joel Mackinney	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-80768-37015.2
Client Contact: Mr. Leo Linnemanstons, P.G.	Phone: 414-520-2179	E-Mail: sandie.fredrick@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #:

Address: 1350 Deming Way Suite 100	Due Date Requested:
City: Middleton	TAT Requested (days):
State, Zip: WI, 53562	
Phone: 608-836-9800(Tel)	PO #: 60611431
Email: leo.linnemanstons@aecom.com	WO #:
Project Name: ATC - Madison 60611431	Project #: 50016386
Site:	SSOW#:

Analysis Requested

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=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_JDA - PFAS	Total Number of containers	Special Instructions/Note:
			Preservation Code		X	X	N	X	
EB - Auger	4/20/20	0900	G	Water	N		X	2	
EB - Well Screen	4/20/20	1000	G	Water	N		X	2	
				Water					
				Water					
				Water					
				Water					
				Water					

320-60299 Chain of Custody

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: Joel Mackinney	Date/Time: 4/20/20 1435	Company: AECOM	Received by:	Date/Time: 4-20-20 1435	Company: TA
Relinquished by:	Date/Time: 4-20-20 17:00	Company: TA	Received by:	Date/Time: 4/21/20 940	Company: ETA - SDC
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☒ Yes ☐ No	Custody Seal No.: 102553	Cooler Temperature(s) °C and Other Remarks: 0.6°C

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: AECOM

Job Number: 320-60299-1

Login Number: 60299
List Number: 1
Creator: Nelson, Kym D

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1022553
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.	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 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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-61091-1
Client Project/Site: ATC - Madison 60611431

For:
AECOM
1350 Deming Way Suite 100
Middleton, Wisconsin 53562

Attn: Mr. Leo B Linnemanstons, P.G.

Authorized for release by:
6/2/2020 9:22:49 AM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

Table of Contents

Definitions/Glossary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5	Isotope dilution analyte is outside acceptance limits.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)
MQL	Method Quantitation Limit
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)

Case Narrative

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Job ID: 320-61091-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-61091-1

Receipt
The samples were received on 5/22/2020 10:15 AM; the samples arrived in good condition, properly preserved, and where required, on ice. The temperature of the cooler at receipt time was 1.6°C

LCMS
Method PFC_IDA: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-380732.<PrepAnalyticalBatch> Method: 3535 PFC-W

Method PFC_IDA: The following samples are light yellow and contain floating particulates in the sample bottle prior to extraction:MW-1 (320-61091-1), MW-1 FD (320-61091-2) and Trans Sump (320-61091-6).preparation batch 320-380732 Method: 3535 PFC-W

Method PFC_IDA: The following sample is light yellow after final voluming:Trans Sump (320-61091-6).preparation batch 320-380732 Method: 3535 PFC-W

Method PFC_IDA: The “I” qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte. Trans Sump (320-61091-6)

Method PFC_IDA: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS in the following sample: Trans Sump (320-61091-6). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method PFC_IDA: Results for samples MW-1 (320-61091-1), MW-1 FD (320-61091-2) and Trans Sump (320-61091-6) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

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: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: MW-1 — Lab Sample ID: 320-61091-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	97	B	1.9	0.34	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	210		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	45		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.1		1.9	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.7	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.3	J	1.9	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.1	J	1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.69	J B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.9		1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.34	J	1.9	0.34	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	5.3		2.0	0.85	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	630		19	4.7	ng/L	10		537 (modified)	Total/NA
6:2 FTS - DL	260		190	19	ng/L	10		537 (modified)	Total/NA

Client Sample ID: MW-1 FD — Lab Sample ID: 320-61091-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	98	B	1.9	0.33	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	210		1.9	0.54	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	46		1.9	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.1		1.9	0.80	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	2.0		1.9	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.1	J	1.9	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.78	J B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	9.0		1.9	0.51	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.43	J	1.9	0.33	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	5.3		2.0	0.82	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	550		19	4.6	ng/L	10		537 (modified)	Total/NA
6:2 FTS - DL	250		190	19	ng/L	10		537 (modified)	Total/NA

Client Sample ID: FB 05212020 — Lab Sample ID: 320-61091-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.25	J B	1.9	0.16	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EB 05212020 — Lab Sample ID: 320-61091-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.45	J B	1.9	0.33	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)	1.4	J	1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.34	J	1.9	0.33	ng/L	1		537 (modified)	Total/NA

Client Sample ID: WCB Sump — Lab Sample ID: 320-61091-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.0	B	1.9	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	7.6		1.9	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.5		1.9	0.57	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.5	J	1.9	0.24	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WCB Sump (Continued)

Lab Sample ID: 320-61091-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	1.9		1.9	0.83	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.57	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.49	J	1.9	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.5	J	1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	J B	1.9	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.8		1.9	0.53	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.51	J	1.9	0.34	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	2.0		2.0	0.86	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Trans Sump

Lab Sample ID: 320-61091-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	230		1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	14		1.8	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	7.6		1.8	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	2.7		1.8	0.28	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.3	I	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.8	B	1.8	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	41		1.8	0.50	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.43	J	1.8	0.32	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	15		1.9	0.81	ng/L	1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA) - DL	460	B	92	16	ng/L	50		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	3100		92	22	ng/L	50		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	1400		92	27	ng/L	50		537 (modified)	Total/NA
6:2 FTS - DL	6700		920	92	ng/L	50		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: MW-1
Date Collected: 05/21/20 12:00
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**97**	**B**	1.9	0.34	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorohexanoic acid (PFHxA)	**210**		1.9	0.56	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluoroheptanoic acid (PFHpA)	**45**		1.9	0.24	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorooctanoic acid (PFOA)	**5.1**		1.9	0.82	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorononanoic acid (PFNA)	**1.7**	**J**	1.9	0.26	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorodecanoic acid (PFDA)	**1.3**	**J**	1.9	0.30	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorotridecanoic acid (PFTriA)	<1.3		1.9	1.3	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		1.9	0.28	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.86		1.9	0.86	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorobutanesulfonic acid (PFBS)	**1.1**	**J**	1.9	0.19	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.44		1.9	0.44	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorohexanesulfonic acid (PFHxS)	**0.69**	**J B**	1.9	0.16	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorooctanesulfonic acid (PFOS)	**8.9**		1.9	0.52	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorooctanesulfonamide (FOSA)	**0.34**	**J**	1.9	0.34	ng/L		05/26/20 19:34	05/28/20 19:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		19	3.0	ng/L		05/26/20 19:34	05/28/20 19:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		05/26/20 19:34	05/28/20 19:42	1
NEtFOSA	<0.84		1.9	0.84	ng/L		05/26/20 19:34	05/28/20 19:42	1
NMeFOSA	<0.41		1.9	0.41	ng/L		05/26/20 19:34	05/28/20 19:42	1
Perfluorododecanesulfonic acid (PFDoS)	<0.43		1.9	0.43	ng/L		05/26/20 19:34	05/28/20 19:42	1
NMeFOSE	<1.3		3.8	1.3	ng/L		05/26/20 19:34	05/28/20 19:42	1
NEtFOSE	<0.82		1.9	0.82	ng/L		05/26/20 19:34	05/28/20 19:42	1
ADONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 19:42	1
F-53B Major	<0.23		1.9	0.23	ng/L		05/26/20 19:34	05/28/20 19:42	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		05/26/20 19:34	05/28/20 19:42	1
F-53B Minor	<0.31		1.9	0.31	ng/L		05/26/20 19:34	05/28/20 19:42	1
NaDONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 19:42	1
DONA	<0.17		1.9	0.17	ng/L		05/26/20 19:34	05/28/20 19:42	1
Ammonium Perfluorooctanoate (APFO)	**5.3**		2.0	0.85	ng/L		05/26/20 19:34	05/28/20 19:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*78*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:42*	*1*
13C2 PFHxA	*100*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:42*	*1*
13C4 PFHpA	*111*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:42*	*1*
13C4 PFOA	*115*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:42*	*1*
13C5 PFNA	*110*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:42*	*1*

Client Sample ID: MW-1
Date Collected: 05/21/20 12:00
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-1
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	97		25 - 150	05/26/20 19:34	05/28/20 19:42	1
13C2 PFHxDA	73		25 - 150	05/26/20 19:34	05/28/20 19:42	1
13C2 PFUnA	86		25 - 150	05/26/20 19:34	05/28/20 19:42	1
13C2 PFDoA	88		25 - 150	05/26/20 19:34	05/28/20 19:42	1
13C2 PFTeDA	78		25 - 150	05/26/20 19:34	05/28/20 19:42	1
13C3 PFBS	97		25 - 150	05/26/20 19:34	05/28/20 19:42	1
18O2 PFHxS	112		25 - 150	05/26/20 19:34	05/28/20 19:42	1
13C4 PFOS	100		25 - 150	05/26/20 19:34	05/28/20 19:42	1
13C8 FOSA	88		25 - 150	05/26/20 19:34	05/28/20 19:42	1
d3-NMeFOSAA	107		25 - 150	05/26/20 19:34	05/28/20 19:42	1
d5-NEtFOSAA	103		25 - 150	05/26/20 19:34	05/28/20 19:42	1
d-N-MeFOSA-M	60		20 - 150	05/26/20 19:34	05/28/20 19:42	1
d-N-EtFOSA-M	50		20 - 150	05/26/20 19:34	05/28/20 19:42	1
d7-N-MeFOSE-M	36		10 - 120	05/26/20 19:34	05/28/20 19:42	1
d9-N-EtFOSE-M	27		10 - 120	05/26/20 19:34	05/28/20 19:42	1
13C3 HFPO-DA	98		25 - 150	05/26/20 19:34	05/28/20 19:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	**630**		19	4.7	ng/L		05/26/20 19:34	05/29/20 23:11	10
4:2 FTS	<50		190	50	ng/L		05/26/20 19:34	05/29/20 23:11	10
6:2 FTS	**260**		190	19	ng/L		05/26/20 19:34	05/29/20 23:11	10
8:2 FTS	<19		190	19	ng/L		05/26/20 19:34	05/29/20 23:11	10
10:2 FTS	<1.8		19	1.8	ng/L		05/26/20 19:34	05/29/20 23:11	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	88		25 - 150	05/26/20 19:34	05/29/20 23:11	10
M2-6:2 FTS	125		25 - 150	05/26/20 19:34	05/29/20 23:11	10
M2-8:2 FTS	102		25 - 150	05/26/20 19:34	05/29/20 23:11	10
M2-4:2 FTS	113		25 - 150	05/26/20 19:34	05/29/20 23:11	10

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: MW-1 FD
Date Collected: 05/21/20 12:00
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-2
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**98**	**B**	1.9	0.33	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorohexanoic acid (PFHxA)	**210**		1.9	0.54	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluoroheptanoic acid (PFHpA)	**46**		1.9	0.23	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorooctanoic acid (PFOA)	**5.1**		1.9	0.80	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorononanoic acid (PFNA)	**2.0**		1.9	0.25	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorodecanoic acid (PFDA)	**1.1**	**J**	1.9	0.29	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorododecanoic acid (PFDoA)	<0.52		1.9	0.52	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorotetradecanoic acid (PFTeA)	<0.27		1.9	0.27	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.83		1.9	0.83	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorobutanesulfonic acid (PFBS)	**1.0**	**J**	1.9	0.19	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.43		1.9	0.43	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.9	0.28	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorohexanesulfonic acid (PFHxS)	**0.78**	**J B**	1.9	0.16	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorooctanesulfonic acid (PFOS)	**9.0**		1.9	0.51	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorooctanesulfonamide (FOSA)	**0.43**	**J**	1.9	0.33	ng/L		05/26/20 19:34	05/28/20 19:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.9		19	2.9	ng/L		05/26/20 19:34	05/28/20 19:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		05/26/20 19:34	05/28/20 19:51	1
NEtFOSA	<0.82		1.9	0.82	ng/L		05/26/20 19:34	05/28/20 19:51	1
NMeFOSA	<0.40		1.9	0.40	ng/L		05/26/20 19:34	05/28/20 19:51	1
Perfluorododecanesulfonic acid (PFDoS)	<0.42		1.9	0.42	ng/L		05/26/20 19:34	05/28/20 19:51	1
NMeFOSE	<1.3		3.7	1.3	ng/L		05/26/20 19:34	05/28/20 19:51	1
NEtFOSE	<0.80		1.9	0.80	ng/L		05/26/20 19:34	05/28/20 19:51	1
ADONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 19:51	1
F-53B Major	<0.22		1.9	0.22	ng/L		05/26/20 19:34	05/28/20 19:51	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		05/26/20 19:34	05/28/20 19:51	1
F-53B Minor	<0.30		1.9	0.30	ng/L		05/26/20 19:34	05/28/20 19:51	1
NaDONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 19:51	1
DONA	<0.17		1.9	0.17	ng/L		05/26/20 19:34	05/28/20 19:51	1
Ammonium Perfluorooctanoate (APFO)	**5.3**		2.0	0.82	ng/L		05/26/20 19:34	05/28/20 19:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*77*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:51*	*1*
13C2 PFHxA	*99*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:51*	*1*
13C4 PFHpA	*109*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:51*	*1*
13C4 PFOA	*114*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:51*	*1*
13C5 PFNA	*120*		*25 - 150*	*05/26/20 19:34*	*05/28/20 19:51*	*1*

Client Sample ID: MW-1 FD

Date Collected: 05/21/20 12:00
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-2

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	116		25 - 150	05/26/20 19:34	05/28/20 19:51	1
13C2 PFHxDA	95		25 - 150	05/26/20 19:34	05/28/20 19:51	1
13C2 PFUnA	100		25 - 150	05/26/20 19:34	05/28/20 19:51	1
13C2 PFDoA	87		25 - 150	05/26/20 19:34	05/28/20 19:51	1
13C2 PFTeDA	103		25 - 150	05/26/20 19:34	05/28/20 19:51	1
13C3 PFBS	96		25 - 150	05/26/20 19:34	05/28/20 19:51	1
18O2 PFHxS	110		25 - 150	05/26/20 19:34	05/28/20 19:51	1
13C4 PFOS	101		25 - 150	05/26/20 19:34	05/28/20 19:51	1
13C8 FOSA	90		25 - 150	05/26/20 19:34	05/28/20 19:51	1
d3-NMeFOSAA	108		25 - 150	05/26/20 19:34	05/28/20 19:51	1
d5-NEtFOSAA	103		25 - 150	05/26/20 19:34	05/28/20 19:51	1
d-N-MeFOSA-M	61		20 - 150	05/26/20 19:34	05/28/20 19:51	1
d-N-EtFOSA-M	53		20 - 150	05/26/20 19:34	05/28/20 19:51	1
d7-N-MeFOSE-M	34		10 - 120	05/26/20 19:34	05/28/20 19:51	1
d9-N-EtFOSE-M	29		10 - 120	05/26/20 19:34	05/28/20 19:51	1
13C3 HFPO-DA	97		25 - 150	05/26/20 19:34	05/28/20 19:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	**550**		19	4.6	ng/L		05/26/20 19:34	05/29/20 23:20	10
4:2 FTS	<49		190	49	ng/L		05/26/20 19:34	05/29/20 23:20	10
6:2 FTS	**250**		190	19	ng/L		05/26/20 19:34	05/29/20 23:20	10
8:2 FTS	<19		190	19	ng/L		05/26/20 19:34	05/29/20 23:20	10
10:2 FTS	<1.8		19	1.8	ng/L		05/26/20 19:34	05/29/20 23:20	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	87		25 - 150	05/26/20 19:34	05/29/20 23:20	10
M2-6:2 FTS	119		25 - 150	05/26/20 19:34	05/29/20 23:20	10
M2-8:2 FTS	103		25 - 150	05/26/20 19:34	05/29/20 23:20	10
M2-4:2 FTS	105		25 - 150	05/26/20 19:34	05/29/20 23:20	10

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: FB 05212020
Date Collected: 05/21/20 12:40
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-3
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.33		1.9	0.33	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluoropentanoic acid (PFPeA)	<0.46		1.9	0.46	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorohexanoic acid (PFHxA)	<0.54		1.9	0.54	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.9	0.23	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorooctanoic acid (PFOA)	<0.79		1.9	0.79	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorononanoic acid (PFNA)	<0.25		1.9	0.25	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorodecanoic acid (PFDA)	<0.29		1.9	0.29	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorododecanoic acid (PFDoA)	<0.51		1.9	0.51	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorotetradecanoic acid (PFTeA)	<0.27		1.9	0.27	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.83		1.9	0.83	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.43		1.9	0.43	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.9	0.28	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorohexanesulfonic acid (PFHxS)	**0.25**	**J B**	1.9	0.16	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorooctanesulfonic acid (PFOS)	<0.50		1.9	0.50	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorooctanesulfonamide (FOSA)	<0.33		1.9	0.33	ng/L		05/26/20 19:34	05/28/20 20:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.9		19	2.9	ng/L		05/26/20 19:34	05/28/20 20:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		05/26/20 19:34	05/28/20 20:00	1
4:2 FTS	<4.8		19	4.8	ng/L		05/26/20 19:34	05/28/20 20:00	1
6:2 FTS	<1.9		19	1.9	ng/L		05/26/20 19:34	05/28/20 20:00	1
8:2 FTS	<1.9		19	1.9	ng/L		05/26/20 19:34	05/28/20 20:00	1
10:2 FTS	<0.18		1.9	0.18	ng/L		05/26/20 19:34	05/28/20 20:00	1
NEtFOSA	<0.81		1.9	0.81	ng/L		05/26/20 19:34	05/28/20 20:00	1
NMeFOSA	<0.40		1.9	0.40	ng/L		05/26/20 19:34	05/28/20 20:00	1
Perfluorododecanesulfonic acid (PFDoS)	<0.42		1.9	0.42	ng/L		05/26/20 19:34	05/28/20 20:00	1
NMeFOSE	<1.3		3.7	1.3	ng/L		05/26/20 19:34	05/28/20 20:00	1
NEtFOSE	<0.79		1.9	0.79	ng/L		05/26/20 19:34	05/28/20 20:00	1
ADONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 20:00	1
F-53B Major	<0.22		1.9	0.22	ng/L		05/26/20 19:34	05/28/20 20:00	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		05/26/20 19:34	05/28/20 20:00	1
F-53B Minor	<0.30		1.9	0.30	ng/L		05/26/20 19:34	05/28/20 20:00	1
NaDONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 20:00	1
DONA	<0.17		1.9	0.17	ng/L		05/26/20 19:34	05/28/20 20:00	1
Ammonium Perfluorooctanoate (APFO)	<0.82		2.0	0.82	ng/L		05/26/20 19:34	05/28/20 20:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:00*	*1*
13C5 PFPeA	*99*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:00*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: FB 05212020
Date Collected: 05/21/20 12:40
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-3
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	106		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C4 PFHpA	112		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C4 PFOA	105		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C5 PFNA	112		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C2 PFDA	100		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C2 PFHxDA	78		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C2 PFUnA	95		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C2 PFDoA	97		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C2 PFTeDA	97		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C3 PFBS	100		25 - 150	05/26/20 19:34	05/28/20 20:00	1
18O2 PFHxS	107		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C4 PFOS	102		25 - 150	05/26/20 19:34	05/28/20 20:00	1
13C8 FOSA	91		25 - 150	05/26/20 19:34	05/28/20 20:00	1
d3-NMeFOSAA	90		25 - 150	05/26/20 19:34	05/28/20 20:00	1
d5-NEtFOSAA	89		25 - 150	05/26/20 19:34	05/28/20 20:00	1
M2-6:2 FTS	95		25 - 150	05/26/20 19:34	05/28/20 20:00	1
M2-8:2 FTS	96		25 - 150	05/26/20 19:34	05/28/20 20:00	1
M2-4:2 FTS	88		25 - 150	05/26/20 19:34	05/28/20 20:00	1
d-N-MeFOSA-M	72		20 - 150	05/26/20 19:34	05/28/20 20:00	1
d-N-EtFOSA-M	55		20 - 150	05/26/20 19:34	05/28/20 20:00	1
d7-N-MeFOSE-M	25		10 - 120	05/26/20 19:34	05/28/20 20:00	1
d9-N-EtFOSE-M	22		10 - 120	05/26/20 19:34	05/28/20 20:00	1
13C3 HFPO-DA	105		25 - 150	05/26/20 19:34	05/28/20 20:00	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: EB 05212020
Date Collected: 05/21/20 12:45
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-4
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.45**	**J B**	1.9	0.33	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluoropentanoic acid (PFPeA)	<0.47		1.9	0.47	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorohexanoic acid (PFHxA)	<0.55		1.9	0.55	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluoroheptanoic acid (PFHpA)	<0.24		1.9	0.24	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorooctanoic acid (PFOA)	<0.81		1.9	0.81	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorononanoic acid (PFNA)	<0.26		1.9	0.26	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		1.9	0.28	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.85		1.9	0.85	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.44		1.9	0.44	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorohexanesulfonic acid (PFHxS)	**0.33**	**J B**	1.9	0.16	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorooctanesulfonic acid (PFOS)	**1.4**	**J**	1.9	0.52	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorooctanesulfonamide (FOSA)	**0.34**	**J**	1.9	0.33	ng/L		05/26/20 19:34	05/28/20 20:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		19	3.0	ng/L		05/26/20 19:34	05/28/20 20:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		05/26/20 19:34	05/28/20 20:10	1
4:2 FTS	<5.0		19	5.0	ng/L		05/26/20 19:34	05/28/20 20:10	1
6:2 FTS	<1.9		19	1.9	ng/L		05/26/20 19:34	05/28/20 20:10	1
8:2 FTS	<1.9		19	1.9	ng/L		05/26/20 19:34	05/28/20 20:10	1
10:2 FTS	<0.18		1.9	0.18	ng/L		05/26/20 19:34	05/28/20 20:10	1
NEtFOSA	<0.83		1.9	0.83	ng/L		05/26/20 19:34	05/28/20 20:10	1
NMeFOSA	<0.41		1.9	0.41	ng/L		05/26/20 19:34	05/28/20 20:10	1
Perfluorododecanesulfonic acid (PFDoS)	<0.43		1.9	0.43	ng/L		05/26/20 19:34	05/28/20 20:10	1
NMeFOSE	<1.3		3.8	1.3	ng/L		05/26/20 19:34	05/28/20 20:10	1
NEtFOSE	<0.81		1.9	0.81	ng/L		05/26/20 19:34	05/28/20 20:10	1
ADONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 20:10	1
F-53B Major	<0.23		1.9	0.23	ng/L		05/26/20 19:34	05/28/20 20:10	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		05/26/20 19:34	05/28/20 20:10	1
F-53B Minor	<0.31		1.9	0.31	ng/L		05/26/20 19:34	05/28/20 20:10	1
NaDONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 20:10	1
DONA	<0.17		1.9	0.17	ng/L		05/26/20 19:34	05/28/20 20:10	1
Ammonium Perfluorooctanoate (APFO)	<0.84		2.0	0.84	ng/L		05/26/20 19:34	05/28/20 20:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:10*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: EB 05212020
Date Collected: 05/21/20 12:45
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-4
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	113		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C2 PFHxA	120		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C4 PFHpA	125		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C4 PFOA	121		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C5 PFNA	113		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C2 PFDA	130		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C2 PFHxDA	112		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C2 PFUnA	118		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C2 PFDoA	111		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C2 PFTeDA	120		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C3 PFBS	117		25 - 150	05/26/20 19:34	05/28/20 20:10	1
18O2 PFHxS	126		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C4 PFOS	113		25 - 150	05/26/20 19:34	05/28/20 20:10	1
13C8 FOSA	104		25 - 150	05/26/20 19:34	05/28/20 20:10	1
d3-NMeFOSAA	105		25 - 150	05/26/20 19:34	05/28/20 20:10	1
d5-NEtFOSAA	98		25 - 150	05/26/20 19:34	05/28/20 20:10	1
M2-6:2 FTS	111		25 - 150	05/26/20 19:34	05/28/20 20:10	1
M2-8:2 FTS	106		25 - 150	05/26/20 19:34	05/28/20 20:10	1
M2-4:2 FTS	106		25 - 150	05/26/20 19:34	05/28/20 20:10	1
d-N-MeFOSA-M	85		20 - 150	05/26/20 19:34	05/28/20 20:10	1
d-N-EtFOSA-M	64		20 - 150	05/26/20 19:34	05/28/20 20:10	1
d7-N-MeFOSE-M	37		10 - 120	05/26/20 19:34	05/28/20 20:10	1
d9-N-EtFOSE-M	31		10 - 120	05/26/20 19:34	05/28/20 20:10	1
13C3 HFPO-DA	118		25 - 150	05/26/20 19:34	05/28/20 20:10	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: WCB Sump
Date Collected: 05/21/20 14:00
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-5
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**8.0**	**B**	1.9	0.34	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluoropentanoic acid (PFPeA)	**7.6**		1.9	0.48	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorohexanoic acid (PFHxA)	**3.5**		1.9	0.57	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluoroheptanoic acid (PFHpA)	**1.5**	**J**	1.9	0.24	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorooctanoic acid (PFOA)	**1.9**		1.9	0.83	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorononanoic acid (PFNA)	**0.57**	**J**	1.9	0.26	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorodecanoic acid (PFDA)	**0.49**	**J**	1.9	0.30	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorododecanoic acid (PFDoA)	<0.54		1.9	0.54	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorotridecanoic acid (PFTriA)	<1.3		1.9	1.3	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		1.9	0.28	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.87		1.9	0.87	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorobutanesulfonic acid (PFBS)	**1.5**	**J**	1.9	0.19	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.45		1.9	0.45	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorohexanesulfonic acid (PFHxS)	**1.1**	**J B**	1.9	0.17	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		1.9	0.19	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorooctanesulfonic acid (PFOS)	**3.8**		1.9	0.53	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorononanesulfonic acid (PFNS)	<0.16		1.9	0.16	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorooctanesulfonamide (FOSA)	**0.51**	**J**	1.9	0.34	ng/L		05/26/20 19:34	05/28/20 20:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		19	3.0	ng/L		05/26/20 19:34	05/28/20 20:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		19	1.9	ng/L		05/26/20 19:34	05/28/20 20:19	1
4:2 FTS	<5.1		19	5.1	ng/L		05/26/20 19:34	05/28/20 20:19	1
6:2 FTS	<1.9		19	1.9	ng/L		05/26/20 19:34	05/28/20 20:19	1
8:2 FTS	<1.9		19	1.9	ng/L		05/26/20 19:34	05/28/20 20:19	1
10:2 FTS	<0.19		1.9	0.19	ng/L		05/26/20 19:34	05/28/20 20:19	1
NEtFOSA	<0.85		1.9	0.85	ng/L		05/26/20 19:34	05/28/20 20:19	1
NMeFOSA	<0.42		1.9	0.42	ng/L		05/26/20 19:34	05/28/20 20:19	1
Perfluorododecanesulfonic acid (PFDoS)	<0.44		1.9	0.44	ng/L		05/26/20 19:34	05/28/20 20:19	1
NMeFOSE	<1.4		3.9	1.4	ng/L		05/26/20 19:34	05/28/20 20:19	1
NEtFOSE	<0.83		1.9	0.83	ng/L		05/26/20 19:34	05/28/20 20:19	1
ADONA	<0.19		2.0	0.19	ng/L		05/26/20 19:34	05/28/20 20:19	1
F-53B Major	<0.23		1.9	0.23	ng/L		05/26/20 19:34	05/28/20 20:19	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		05/26/20 19:34	05/28/20 20:19	1
F-53B Minor	<0.31		1.9	0.31	ng/L		05/26/20 19:34	05/28/20 20:19	1
NaDONA	<0.19		2.0	0.19	ng/L		05/26/20 19:34	05/28/20 20:19	1
DONA	<0.18		1.9	0.18	ng/L		05/26/20 19:34	05/28/20 20:19	1
Ammonium Perfluorooctanoate (APFO)	**2.0**		2.0	0.86	ng/L		05/26/20 19:34	05/28/20 20:19	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: WCB Sump
Date Collected: 05/21/20 14:00
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-5
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	87		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C5 PFPeA	95		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C2 PFHxA	115		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C4 PFHpA	118		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C4 PFOA	101		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C5 PFNA	117		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C2 PFDA	93		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C2 PFHxDA	90		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C2 PFUnA	94		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C2 PFDoA	75		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C2 PFTeDA	101		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C3 PFBS	99		25 - 150	05/26/20 19:34	05/28/20 20:19	1
18O2 PFHxS	111		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C4 PFOS	98		25 - 150	05/26/20 19:34	05/28/20 20:19	1
13C8 FOSA	94		25 - 150	05/26/20 19:34	05/28/20 20:19	1
d3-NMeFOSAA	91		25 - 150	05/26/20 19:34	05/28/20 20:19	1
d5-NEtFOSAA	85		25 - 150	05/26/20 19:34	05/28/20 20:19	1
M2-6:2 FTS	120		25 - 150	05/26/20 19:34	05/28/20 20:19	1
M2-8:2 FTS	102		25 - 150	05/26/20 19:34	05/28/20 20:19	1
M2-4:2 FTS	137		25 - 150	05/26/20 19:34	05/28/20 20:19	1
d-N-MeFOSA-M	58		20 - 150	05/26/20 19:34	05/28/20 20:19	1
d-N-EtFOSA-M	48		20 - 150	05/26/20 19:34	05/28/20 20:19	1
d7-N-MeFOSE-M	30		10 - 120	05/26/20 19:34	05/28/20 20:19	1
d9-N-EtFOSE-M	25		10 - 120	05/26/20 19:34	05/28/20 20:19	1
13C3 HFPO-DA	103		25 - 150	05/26/20 19:34	05/28/20 20:19	1

Client Sample ID: Trans Sump

Date Collected: 05/21/20 14:50
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-6

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	**230**		1.8	0.23	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorooctanoic acid (PFOA)	**14**		1.8	0.78	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorononanoic acid (PFNA)	**7.6**		1.8	0.25	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorodecanoic acid (PFDA)	**2.7**		1.8	0.28	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorotetradecanoic acid (PFTeA)	<0.27		1.8	0.27	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.82		1.8	0.82	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorobutanesulfonic acid (PFBS)	**5.3**	**I**	1.8	0.18	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.42		1.8	0.42	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.8	0.28	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorohexanesulfonic acid (PFHxS)	**1.8**	**B**	1.8	0.16	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorooctanesulfonic acid (PFOS)	**41**		1.8	0.50	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.8	0.15	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorooctanesulfonamide (FOSA)	**0.43**	**J**	1.8	0.32	ng/L		05/26/20 19:34	05/28/20 20:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.8		18	2.8	ng/L		05/26/20 19:34	05/28/20 20:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		18	1.7	ng/L		05/26/20 19:34	05/28/20 20:28	1
NEtFOSA	<0.80		1.8	0.80	ng/L		05/26/20 19:34	05/28/20 20:28	1
NMeFOSA	<0.39		1.8	0.39	ng/L		05/26/20 19:34	05/28/20 20:28	1
Perfluorododecanesulfonic acid (PFDoS)	<0.41		1.8	0.41	ng/L		05/26/20 19:34	05/28/20 20:28	1
NMeFOSE	<1.3		3.7	1.3	ng/L		05/26/20 19:34	05/28/20 20:28	1
NEtFOSE	<0.78		1.8	0.78	ng/L		05/26/20 19:34	05/28/20 20:28	1
ADONA	<0.17		1.9	0.17	ng/L		05/26/20 19:34	05/28/20 20:28	1
F-53B Major	<0.22		1.8	0.22	ng/L		05/26/20 19:34	05/28/20 20:28	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		05/26/20 19:34	05/28/20 20:28	1
F-53B Minor	<0.29		1.8	0.29	ng/L		05/26/20 19:34	05/28/20 20:28	1
NaDONA	<0.17		1.9	0.17	ng/L		05/26/20 19:34	05/28/20 20:28	1
DONA	<0.17		1.8	0.17	ng/L		05/26/20 19:34	05/28/20 20:28	1
Ammonium Perfluorooctanoate (APFO)	**15**		1.9	0.81	ng/L		05/26/20 19:34	05/28/20 20:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFHpA	*122*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:28*	*1*
13C4 PFOA	*99*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:28*	*1*
13C5 PFNA	*145*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:28*	*1*
13C2 PFDA	*92*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:28*	*1*
13C2 PFHxDA	*90*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:28*	*1*
13C2 PFUnA	*128*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:28*	*1*
13C2 PFDoA	*146*		*25 - 150*	*05/26/20 19:34*	*05/28/20 20:28*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: Trans Sump

Date Collected: 05/21/20 14:50
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-6

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	110		25 - 150	05/26/20 19:34	05/28/20 20:28	1
13C3 PFBS	127		25 - 150	05/26/20 19:34	05/28/20 20:28	1
18O2 PFHxS	144		25 - 150	05/26/20 19:34	05/28/20 20:28	1
13C4 PFOS	135		25 - 150	05/26/20 19:34	05/28/20 20:28	1
13C8 FOSA	83		25 - 150	05/26/20 19:34	05/28/20 20:28	1
d3-NMeFOSAA	128		25 - 150	05/26/20 19:34	05/28/20 20:28	1
d5-NEtFOSAA	128		25 - 150	05/26/20 19:34	05/28/20 20:28	1
M2-8:2 FTS	144		25 - 150	05/26/20 19:34	05/28/20 20:28	1
d-N-MeFOSA-M	79		20 - 150	05/26/20 19:34	05/28/20 20:28	1
d-N-EtFOSA-M	78		20 - 150	05/26/20 19:34	05/28/20 20:28	1
d7-N-MeFOSE-M	65		10 - 120	05/26/20 19:34	05/28/20 20:28	1
d9-N-EtFOSE-M	54		10 - 120	05/26/20 19:34	05/28/20 20:28	1
13C3 HFPO-DA	116		25 - 150	05/26/20 19:34	05/28/20 20:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**460**	**B**	92	16	ng/L		05/26/20 19:34	05/29/20 23:29	50
Perfluoropentanoic acid (PFPeA)	**3100**		92	22	ng/L		05/26/20 19:34	05/29/20 23:29	50
Perfluorohexanoic acid (PFHxA)	**1400**		92	27	ng/L		05/26/20 19:34	05/29/20 23:29	50
4:2 FTS	<240		920	240	ng/L		05/26/20 19:34	05/29/20 23:29	50
6:2 FTS	**6700**		920	92	ng/L		05/26/20 19:34	05/29/20 23:29	50
8:2 FTS	<92		920	92	ng/L		05/26/20 19:34	05/29/20 23:29	50
10:2 FTS	<8.7		92	8.7	ng/L		05/26/20 19:34	05/29/20 23:29	50

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	93		25 - 150	05/26/20 19:34	05/29/20 23:29	50
13C5 PFPeA	101		25 - 150	05/26/20 19:34	05/29/20 23:29	50
13C2 PFHxA	111		25 - 150	05/26/20 19:34	05/29/20 23:29	50
M2-6:2 FTS	153	*5	25 - 150	05/26/20 19:34	05/29/20 23:29	50
M2-8:2 FTS	100		25 - 150	05/26/20 19:34	05/29/20 23:29	50
M2-4:2 FTS	129		25 - 150	05/26/20 19:34	05/29/20 23:29	50

Isotope Dilution Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

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)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFHxDA (25-150)
320-61091-1	MW-1	78		100	111	115	110	97	73
320-61091-1 - DL	MW-1		88						
320-61091-2	MW-1 FD	77		99	109	114	120	116	95
320-61091-2 - DL	MW-1 FD		87						
320-61091-3	FB 05212020	95	99	106	112	105	112	100	78
320-61091-4	EB 05212020	90	113	120	125	121	113	130	112
320-61091-5	WCB Sump	87	95	115	118	101	117	93	90
320-61091-6	Trans Sump				122	99	145	92	90
320-61091-6 - DL	Trans Sump	93	101	111					
LCS 320-380732/2-A	Lab Control Sample	107	113	117	121	108	110	135	113
LCSD 320-380732/3-A	Lab Control Sample Dup	98	99	112	111	105	111	104	97
MB 320-380732/1-A	Method Blank	92	96	103	105	98	109	102	92

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
320-61091-1	MW-1	86	88	78	97	112	100	88	107
320-61091-1 - DL	MW-1								
320-61091-2	MW-1 FD	100	87	103	96	110	101	90	108
320-61091-2 - DL	MW-1 FD								
320-61091-3	FB 05212020	95	97	97	100	107	102	91	90
320-61091-4	EB 05212020	118	111	120	117	126	113	104	105
320-61091-5	WCB Sump	94	75	101	99	111	98	94	91
320-61091-6	Trans Sump	128	146	110	127	144	135	83	128
320-61091-6 - DL	Trans Sump								
LCS 320-380732/2-A	Lab Control Sample	103	112	126	114	120	110	102	107
LCSD 320-380732/3-A	Lab Control Sample Dup	105	126	113	102	109	102	95	98
MB 320-380732/1-A	Method Blank	90	90	113	97	104	96	93	96

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)
320-61091-1	MW-1	103				60	50	36	27
320-61091-1 - DL	MW-1		125	102	113				
320-61091-2	MW-1 FD	103				61	53	34	29
320-61091-2 - DL	MW-1 FD		119	103	105				
320-61091-3	FB 05212020	89	95	96	88	72	55	25	22
320-61091-4	EB 05212020	98	111	106	106	85	64	37	31
320-61091-5	WCB Sump	85	120	102	137	58	48	30	25
320-61091-6	Trans Sump	128		144		79	78	65	54
320-61091-6 - DL	Trans Sump		153 *5	100	129				
LCS 320-380732/2-A	Lab Control Sample	102	107	108	101	77	61	35	27
LCSD 320-380732/3-A	Lab Control Sample Dup	97	95	116	91	76	60	31	27
MB 320-380732/1-A	Method Blank	90	98	95	84	66	50	27	22

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (25-150)
320-61091-1	MW-1	98
320-61091-1 - DL	MW-1	
320-61091-2	MW-1 FD	97
320-61091-2 - DL	MW-1 FD	

Isotope Dilution Summary

Client: AECOM
Job ID: 320-61091-1
Project/Site: ATC - Madison 60611431

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**	**HFPODA (25-150)**						
320-61091-3	FB 05212020	105						
320-61091-4	EB 05212020	118						
320-61091-5	WCB Sump	103						
320-61091-6	Trans Sump	116						
320-61091-6 - DL	Trans Sump							
LCS 320-380732/2-A	Lab Control Sample	121						
LCSD 320-380732/3-A	Lab Control Sample Dup	108						
MB 320-380732/1-A	Method Blank	99						

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFHxDA = 13C2 PFHxDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-380732/1-A
Matrix: Water
Analysis Batch: 381351

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 380732

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.378	J	2.0	0.35	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorotetradecanoic acid (PFTeA)	<0.29		2.0	0.29	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.46		2.0	0.46	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorohexanesulfonic acid (PFHxS)	0.257	J	2.0	0.17	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorooctanesulfonamide (FOSA)	<0.35		2.0	0.35	ng/L		05/26/20 19:34	05/28/20 17:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.1		20	3.1	ng/L		05/26/20 19:34	05/28/20 17:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		05/26/20 19:34	05/28/20 17:34	1
4:2 FTS	<5.2		20	5.2	ng/L		05/26/20 19:34	05/28/20 17:34	1
6:2 FTS	<2.0		20	2.0	ng/L		05/26/20 19:34	05/28/20 17:34	1
8:2 FTS	<2.0		20	2.0	ng/L		05/26/20 19:34	05/28/20 17:34	1
10:2 FTS	<0.19		2.0	0.19	ng/L		05/26/20 19:34	05/28/20 17:34	1
NEtFOSA	<0.87		2.0	0.87	ng/L		05/26/20 19:34	05/28/20 17:34	1
NMeFOSA	<0.43		2.0	0.43	ng/L		05/26/20 19:34	05/28/20 17:34	1
Perfluorododecanesulfonic acid (PFDoS)	<0.45		2.0	0.45	ng/L		05/26/20 19:34	05/28/20 17:34	1
NMeFOSE	<1.4		4.0	1.4	ng/L		05/26/20 19:34	05/28/20 17:34	1
NEtFOSE	<0.85		2.0	0.85	ng/L		05/26/20 19:34	05/28/20 17:34	1
ADONA	<0.19		2.1	0.19	ng/L		05/26/20 19:34	05/28/20 17:34	1
F-53B Major	<0.24		2.0	0.24	ng/L		05/26/20 19:34	05/28/20 17:34	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		05/26/20 19:34	05/28/20 17:34	1
F-53B Minor	<0.32		2.0	0.32	ng/L		05/26/20 19:34	05/28/20 17:34	1
NaDONA	<0.19		2.1	0.19	ng/L		05/26/20 19:34	05/28/20 17:34	1
DONA	<0.18		2.0	0.18	ng/L		05/26/20 19:34	05/28/20 17:34	1
Ammonium Perfluorooctanoate (APFO)	<0.88		2.1	0.88	ng/L		05/26/20 19:34	05/28/20 17:34	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*92*		*25 - 150*	*05/26/20 19:34*	*05/28/20 17:34*	*1*

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

Lab Sample ID: MB 320-380732/1-A
Matrix: Water
Analysis Batch: 381351

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 380732

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	96		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C2 PFHxA	103		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C4 PFHpA	105		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C4 PFOA	98		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C5 PFNA	109		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C2 PFDA	102		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C2 PFHxDA	92		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C2 PFUnA	90		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C2 PFDoA	90		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C2 PFTeDA	113		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C3 PFBS	97		25 - 150	05/26/20 19:34	05/28/20 17:34	1
18O2 PFHxS	104		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C4 PFOS	96		25 - 150	05/26/20 19:34	05/28/20 17:34	1
13C8 FOSA	93		25 - 150	05/26/20 19:34	05/28/20 17:34	1
d3-NMeFOSAA	96		25 - 150	05/26/20 19:34	05/28/20 17:34	1
d5-NEtFOSAA	90		25 - 150	05/26/20 19:34	05/28/20 17:34	1
M2-6:2 FTS	98		25 - 150	05/26/20 19:34	05/28/20 17:34	1
M2-8:2 FTS	95		25 - 150	05/26/20 19:34	05/28/20 17:34	1
M2-4:2 FTS	84		25 - 150	05/26/20 19:34	05/28/20 17:34	1
d-N-MeFOSA-M	66		20 - 150	05/26/20 19:34	05/28/20 17:34	1
d-N-EtFOSA-M	50		20 - 150	05/26/20 19:34	05/28/20 17:34	1
d7-N-MeFOSE-M	27		10 - 120	05/26/20 19:34	05/28/20 17:34	1
d9-N-EtFOSE-M	22		10 - 120	05/26/20 19:34	05/28/20 17:34	1
13C3 HFPO-DA	99		25 - 150	05/26/20 19:34	05/28/20 17:34	1

Lab Sample ID: LCS 320-380732/2-A
Matrix: Water
Analysis Batch: 381351

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 380732

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	45.6		ng/L		114	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	41.1		ng/L		103	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	43.1		ng/L		108	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	40.0		ng/L		100	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	39.7		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	40.0	41.7		ng/L		104	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	37.2		ng/L		93	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	46.5		ng/L		116	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	36.0		ng/L		90	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	47.2		ng/L		118	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	33.9		ng/L		85	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	32.0		ng/L		80	76 - 136
Perfluorobutanesulfonic acid (PFBS)	35.4	36.2		ng/L		102	67 - 127
Perfluoro-n-octadecanoic acid (PFODA)	40.0	30.7		ng/L		77	58 - 145

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

Lab Sample ID: LCS 320-380732/2-A
Matrix: Water
Analysis Batch: 381351

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 380732

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanesulfonic acid (PFPeS)	37.5	40.2		ng/L		107	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	32.4		ng/L		89	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	41.8		ng/L		110	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	38.8		ng/L		104	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	39.7		ng/L		103	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	38.4		ng/L		100	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	41.4		ng/L		104	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.6		ng/L		106	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	44.5		ng/L		111	76 - 136
4:2 FTS	37.4	41.4		ng/L		111	79 - 139
6:2 FTS	37.9	40.7		ng/L		107	59 - 175
8:2 FTS	38.3	38.5		ng/L		100	75 - 135
10:2 FTS	38.6	48.0		ng/L		124	64 - 142
NMeFOSA	40.0	44.3		ng/L		111	67 - 154
Perfluorododecanesulfonic acid (PFDoS)	38.7	37.3		ng/L		96	67 - 127
NMeFOSE	40.0	38.8		ng/L		97	70 - 130
NEtFOSE	40.0	42.8		ng/L		107	71 - 131
ADONA	39.5	43.8		ng/L		111	79 - 139
F-53B Major	37.3	38.9		ng/L		104	75 - 135
HFPO-DA (GenX)	40.0	41.1		ng/L		103	51 - 173
F-53B Minor	37.7	37.6		ng/L		100	54 - 114
NaDONA	40.0	44.4		ng/L		111	79 - 139
DONA	37.7	41.8		ng/L		111	79 - 139
Ammonium Perfluorooctanoate (APFO)	41.6	41.3		ng/L		99	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*107*		*25 - 150*
13C5 PFPeA	*113*		*25 - 150*
13C2 PFHxA	*117*		*25 - 150*
13C4 PFHpA	*121*		*25 - 150*
13C4 PFOA	*108*		*25 - 150*
13C5 PFNA	*110*		*25 - 150*
13C2 PFDA	*135*		*25 - 150*
13C2 PFHxDA	*113*		*25 - 150*
13C2 PFUnA	*103*		*25 - 150*
13C2 PFDoA	*112*		*25 - 150*
13C2 PFTeDA	*126*		*25 - 150*
13C3 PFBS	*114*		*25 - 150*
18O2 PFHxS	*120*		*25 - 150*
13C4 PFOS	*110*		*25 - 150*

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

Lab Sample ID: LCS 320-380732/2-A
Matrix: Water
Analysis Batch: 381351

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 380732

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	102		25 - 150
d3-NMeFOSAA	107		25 - 150
d5-NEtFOSAA	102		25 - 150
M2-6:2 FTS	107		25 - 150
M2-8:2 FTS	108		25 - 150
M2-4:2 FTS	101		25 - 150
d-N-MeFOSA-M	77		20 - 150
d-N-EtFOSA-M	61		20 - 150
d7-N-MeFOSE-M	35		10 - 120
d9-N-EtFOSE-M	27		10 - 120
13C3 HFPO-DA	121		25 - 150

Lab Sample ID: LCSD 320-380732/3-A
Matrix: Water
Analysis Batch: 381351

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 380732

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	45.7		ng/L		114	76 - 136	0	30
Perfluoropentanoic acid (PFPeA)			40.0	41.4		ng/L		103	71 - 131	1	30
Perfluorohexanoic acid (PFHxA)			40.0	40.8		ng/L		102	73 - 133	5	30
Perfluoroheptanoic acid (PFHpA)			40.0	43.0		ng/L		108	72 - 132	7	30
Perfluorooctanoic acid (PFOA)			40.0	42.6		ng/L		107	70 - 130	7	30
Perfluorononanoic acid (PFNA)			40.0	33.5		ng/L		84	75 - 135	22	30
Perfluorodecanoic acid (PFDA)			40.0	40.3		ng/L		101	76 - 136	8	30
Perfluoroundecanoic acid (PFUnA)			40.0	39.6		ng/L		99	68 - 128	16	30
Perfluorododecanoic acid (PFDoA)			40.0	30.4		ng/L		76	71 - 131	17	30
Perfluorotridecanoic acid (PFTriA)			40.0	38.0		ng/L		95	71 - 131	22	30
Perfluorotetradecanoic acid (PFTeA)			40.0	39.0		ng/L		98	70 - 130	14	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			40.0	34.3		ng/L		86	76 - 136	7	30
Perfluorobutanesulfonic acid (PFBS)			35.4	35.7		ng/L		101	67 - 127	1	30
Perfluoro-n-octadecanoic acid (PFODA)			40.0	31.7		ng/L		79	58 - 145	3	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	39.7		ng/L		106	66 - 126	1	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	33.0		ng/L		91	59 - 119	2	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	40.7		ng/L		107	76 - 136	3	30
Perfluorooctanesulfonic acid (PFOS)			37.1	37.1		ng/L		100	70 - 130	4	30
Perfluorononanesulfonic acid (PFNS)			38.4	40.2		ng/L		105	75 - 135	1	30
Perfluorodecanesulfonic acid (PFDS)			38.6	38.2		ng/L		99	71 - 131	1	30
Perfluorooctanesulfonamide (FOSA)			40.0	40.0		ng/L		100	73 - 133	3	30

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

Lab Sample ID: LCSD 320-380732/3-A
Matrix: Water
Analysis Batch: 381351

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 380732

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	44.7		ng/L		112	76 - 136	5	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	42.0		ng/L		105	76 - 136	6	30
4:2 FTS			37.4	40.0		ng/L		107	79 - 139	3	30
6:2 FTS			37.9	42.6		ng/L		112	59 - 175	5	30
8:2 FTS			38.3	39.1		ng/L		102	75 - 135	2	30
10:2 FTS			38.6	41.6		ng/L		108	64 - 142	14	30
NMeFOSA			40.0	43.4		ng/L		109	67 - 154	2	30
Perfluorododecanesulfonic acid (PFDoS)			38.7	37.4		ng/L		97	67 - 127	0	30
NMeFOSE			40.0	44.5		ng/L		111	70 - 130	14	30
NEtFOSE			40.0	39.3		ng/L		98	71 - 131	9	30
ADONA			39.5	43.2		ng/L		109	79 - 139	1	30
F-53B Major			37.3	38.4		ng/L		103	75 - 135	1	30
HFPO-DA (GenX)			40.0	42.5		ng/L		106	51 - 173	3	30
F-53B Minor			37.7	37.0		ng/L		98	54 - 114	2	30
NaDONA			40.0	43.7		ng/L		109	79 - 139	1	30
DONA			37.7	41.2		ng/L		109	79 - 139	1	30
Ammonium Perfluorooctanoate (APFO)			41.6	44.4		ng/L		107	70 - 130	7	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*98*		*25 - 150*
13C5 PFPeA	*99*		*25 - 150*
13C2 PFHxA	*112*		*25 - 150*
13C4 PFHpA	*111*		*25 - 150*
13C4 PFOA	*105*		*25 - 150*
13C5 PFNA	*111*		*25 - 150*
13C2 PFDA	*104*		*25 - 150*
13C2 PFHxDA	*97*		*25 - 150*
13C2 PFUnA	*105*		*25 - 150*
13C2 PFDoA	*126*		*25 - 150*
13C2 PFTeDA	*113*		*25 - 150*
13C3 PFBS	*102*		*25 - 150*
18O2 PFHxS	*109*		*25 - 150*
13C4 PFOS	*102*		*25 - 150*
13C8 FOSA	*95*		*25 - 150*
d3-NMeFOSAA	*98*		*25 - 150*
d5-NEtFOSAA	*97*		*25 - 150*
M2-6:2 FTS	*95*		*25 - 150*
M2-8:2 FTS	*116*		*25 - 150*
M2-4:2 FTS	*91*		*25 - 150*
d-N-MeFOSA-M	*76*		*20 - 150*
d-N-EtFOSA-M	*60*		*20 - 150*
d7-N-MeFOSE-M	*31*		*10 - 120*
d9-N-EtFOSE-M	*27*		*10 - 120*
13C3 HFPO-DA	*108*		*25 - 150*

QC Association Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

LCMS

Prep Batch: 380732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-61091-1 - DL	MW-1	Total/NA	Water	3535	
320-61091-1	MW-1	Total/NA	Water	3535	
320-61091-2 - DL	MW-1 FD	Total/NA	Water	3535	
320-61091-2	MW-1 FD	Total/NA	Water	3535	
320-61091-3	FB 05212020	Total/NA	Water	3535	
320-61091-4	EB 05212020	Total/NA	Water	3535	
320-61091-5	WCB Sump	Total/NA	Water	3535	
320-61091-6	Trans Sump	Total/NA	Water	3535	
320-61091-6 - DL	Trans Sump	Total/NA	Water	3535	
MB 320-380732/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-380732/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-380732/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 381351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-61091-1	MW-1	Total/NA	Water	537 (modified)	380732
320-61091-2	MW-1 FD	Total/NA	Water	537 (modified)	380732
320-61091-3	FB 05212020	Total/NA	Water	537 (modified)	380732
320-61091-4	EB 05212020	Total/NA	Water	537 (modified)	380732
320-61091-5	WCB Sump	Total/NA	Water	537 (modified)	380732
320-61091-6	Trans Sump	Total/NA	Water	537 (modified)	380732
MB 320-380732/1-A	Method Blank	Total/NA	Water	537 (modified)	380732
LCS 320-380732/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	380732
LCSD 320-380732/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	380732

Analysis Batch: 381726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-61091-1 - DL	MW-1	Total/NA	Water	537 (modified)	380732
320-61091-2 - DL	MW-1 FD	Total/NA	Water	537 (modified)	380732
320-61091-6 - DL	Trans Sump	Total/NA	Water	537 (modified)	380732

Lab Chronicle

Client: AECOM
Job ID: 320-61091-1
Project/Site: ATC - Madison 60611431

Client Sample ID: MW-1
Lab Sample ID: 320-61091-1
Date Collected: 05/21/20 12:00
Matrix: Water
Date Received: 05/22/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			260 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)		1			381351	05/28/20 19:42	S1M	TAL SAC
Total/NA	Prep	3535	DL		260 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			381726	05/29/20 23:11	IK	TAL SAC

Client Sample ID: MW-1 FD
Lab Sample ID: 320-61091-2
Date Collected: 05/21/20 12:00
Matrix: Water
Date Received: 05/22/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			266.8 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)		1			381351	05/28/20 19:51	S1M	TAL SAC
Total/NA	Prep	3535	DL		266.8 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			381726	05/29/20 23:20	IK	TAL SAC

Client Sample ID: FB 05212020
Lab Sample ID: 320-61091-3
Date Collected: 05/21/20 12:40
Matrix: Water
Date Received: 05/22/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			268.7 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)		1			381351	05/28/20 20:00	S1M	TAL SAC

Client Sample ID: EB 05212020
Lab Sample ID: 320-61091-4
Date Collected: 05/21/20 12:45
Matrix: Water
Date Received: 05/22/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			261.5 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)		1			381351	05/28/20 20:10	S1M	TAL SAC

Client Sample ID: WCB Sump
Lab Sample ID: 320-61091-5
Date Collected: 05/21/20 14:00
Matrix: Water
Date Received: 05/22/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			256.5 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)		1			381351	05/28/20 20:19	S1M	TAL SAC

Client Sample ID: Trans Sump
Lab Sample ID: 320-61091-6
Date Collected: 05/21/20 14:50
Matrix: Water
Date Received: 05/22/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			272.6 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)		1			381351	05/28/20 20:28	S1M	TAL SAC

Lab Chronicle

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Client Sample ID: Trans Sump

Date Collected: 05/21/20 14:50
Date Received: 05/22/20 10:15

Lab Sample ID: 320-61091-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		272.6 mL	10.0 mL	380732	05/26/20 19:34	PV	TAL SAC
Total/NA	Analysis	537 (modified)	DL	50			381726	05/29/20 23:29	IK	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 320-61091-1
Project/Site: ATC - Madison 60611431

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	07-01-21
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-22
Michigan	State	9947	01-31-22
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-21
New Jersey	NELAP	CA005	06-30-21
New York	NELAP	11666	04-01-21
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-21
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-21
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-20 *
West Virginia (DW)	State	9930C	12-31-20
Wyoming	State Program	8TMS-L	01-28-19 *

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
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 SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-61091-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-61091-1	MW-1	Water	05/21/20 12:00	05/22/20 10:15	
320-61091-2	MW-1 FD	Water	05/21/20 12:00	05/22/20 10:15	
320-61091-3	FB 05212020	Water	05/21/20 12:40	05/22/20 10:15	
320-61091-4	EB 05212020	Water	05/21/20 12:45	05/22/20 10:15	
320-61091-5	WCB Sump	Water	05/21/20 14:00	05/22/20 10:15	
320-61091-6	Trans Sump	Water	05/21/20 14:50	05/22/20 10:15	

Eurofins TestAmerica, ~~Chicago~~ Sacramento
~~2417 Bond Street~~ 880 Riverside Parkway
~~University Park, IL 60484~~ West Sacramento CA
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Joel MacKinney	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-74856-34868.1
Client Contact: Mr. Leo Linnemanstons, P.G.	Phone: 414 944 6185	E-Mail: sandie.fredrick@testamericainc.com		Page: Page 1 of 2
Company: AECOM				Job #:

Address: 1350 Deming Way Suite 100	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Middleton	TAT Requested (days): Normal TAT		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: WI, 53562			Other:
Phone: 608-836-9800(Tel)	PO #: Purchase Order Requested		
Email: leo.linnemanstons@aecom.com	WO #:		
Project Name: ATC - Blount 60611431	Project #: 50016386		
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 WI 36 list	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
MW-1	5/21/2020	1200	G	Water	N		X	2	
MW-1 FD		1200		Water			X	2	
FB 05212020		1240		Water			X	2	
EB 05212020		1245		Water			X	2	
WCB Sump		1400		Water			X	2	
Trans Sump		1450		Water			X	2	
				Water					
				Water					
				Water					
				Water					
				Water					

320-61091 Chain of Custody

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: Joel MacKinney	Date/Time: 5/21/2020 1600	Company: AECOM	Received by:	Date/Time: 05/22/20 1015	Company: eta SAC
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.: 1073673, 1023455	Cooler Temperature(s) °C and Other Remarks: 1.6

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: AECOM

Job Number: 320-61091-1

Login Number: 61091
List Number: 1
Creator: Oropeza, Salvador

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1023455
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.	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 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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-63888-1
Client Project/Site: ATC - Madison 60611431

For:
AECOM
1350 Deming Way Suite 100
Middleton, Wisconsin 53562

Attn: Mr. Leo B Linnemanstons, P.G.

Sandie Fredrick

Authorized for release by:
8/29/2020 9:06:24 AM

Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

Table of Contents

Definitions/Glossary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Qualifiers

LCMS

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

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Job ID: 320-63888-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-63888-1

Comments
No additional comments.

Receipt
The samples were received on 8/21/2020 9:50 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.2º C.

LCMS
Method 537 (modified): Several Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: BNT-3 (320-63888-5). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS and M2-6:2 FTS the following sample: LVN-6 (320-63888-7). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Results for sample Storm Ceptor (320-63888-9) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS the following sample: MW-1 (320-63888-8). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Results for sample MW-1 (320-63888-8) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

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

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-406277. 3535 PFC Water 320-406277

Method 3535: The following sample was light yellow prior to extraction: BNT-4 (320-63888-6) 3535 PFC Water 320-406277

Method 3535: The following sample was light brown prior to extraction: Storm Ceptor (320-63888-9) 3535 PFC Water 320-406277

Method 3535: During the solid-phase extraction process, the following samples contain non-settable particulates/sediments which clogged the cartridge: BNT-4 (320-63888-6) and Storm Ceptor (320-63888-9) 3535 PFC Water 320-406277

Method 3535: The following sample is yellow at final volume: BNT-4 (320-63888-6) 3535 PFC Water 320-406277

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-407004. 3535_PFC Aqueous

Method 3535: The following samples have a yellowish hue prior to extraction: BNT-4 (320-63888-6) and MW-1 (320-63888-8). preparation batch 320-407004 3535_PFC Aqueous

Method 3535: The following samples have a grayish-yellow hue and contain a small amount of brown sediment prior to extraction:BNT-3 (320-63888-5) and Storm Ceptor (320-63888-9) preparation batch 320-407004 3535_PFC Aqueous

Job ID: 320-63888-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

Method 3535: Sample was very slow to load onto the column. The sediment from the sample collected on the bottom of the reservoir and caused an obstruction to the sample loading. Column was slow to elute. Sample extract is cloudy and yellowish: Storm Ceptor (320-63888-9). preparation batch 320-407004 3535_PFC Aqueous

Method 3535: Sample contains very small green suspended particles. The particles settled on the top of the solid-phase extraction column during sample loading. Sample was slow to load onto the column. The column was slow to elute: BNT-4 (320-63888-6) preparation batch 320-407004
3535_PFC Aqueous

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: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: River Outlet — Lab Sample ID: 320-63888-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.3		2.0	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.5	J	2.0	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.3	J	2.0	0.57	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.81	J	2.0	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.2	J	2.0	0.83	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.34	J	2.0	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.0	J	2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.98	J B	2.0	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.51	J	2.0	0.34	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	1.2	J	2.1	0.86	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Blount St. Outlet — Lab Sample ID: 320-63888-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.4		1.9	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.2		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.4		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.7	J	1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.0		1.9	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.51	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.0		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.1	J	1.9	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.5	B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	13		1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.78	J	1.9	0.34	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.1		2.0	0.85	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Blount St. Outlet FD — Lab Sample ID: 320-63888-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.3		2.0	0.35	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.2		2.0	0.49	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.5		2.0	0.58	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.7	J	2.0	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		2.0	0.85	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.38	J	2.0	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.3	J	2.0	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.6	B	2.0	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	14		2.0	0.54	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.42	J	2.0	0.35	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.3		2.1	0.88	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Path Outlet — Lab Sample ID: 320-63888-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.6		2.0	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.3		2.0	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.6		2.0	0.57	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample ID: Path Outlet (Continued) — Lab Sample ID: 320-63888-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.8	J	2.0	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		2.0	0.83	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.61	J	2.0	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.2	J	2.0	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.4	B	2.0	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	16		2.0	0.53	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.88	J	2.0	0.34	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.3		2.1	0.86	ng/L	1		537 (modified)	Total/NA

Client Sample ID: BNT-3 — Lab Sample ID: 320-63888-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.7		1.9	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.2		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.9		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8	J	1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		1.9	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.92	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.3	J	1.9	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.2	B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	14		1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.37	J	1.9	0.34	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.3		2.0	0.84	ng/L	1		537 (modified)	Total/NA

Client Sample ID: BNT-4 — Lab Sample ID: 320-63888-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.7		1.9	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.5		1.9	0.46	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7		1.9	0.55	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.9		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		1.9	0.80	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.56	J	1.9	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.5		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.3	J	1.9	0.28	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.4	B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	13		1.9	0.51	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.89	J	1.9	0.33	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.2		2.0	0.83	ng/L	1		537 (modified)	Total/NA

Client Sample ID: LVN-6 — Lab Sample ID: 320-63888-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	54		1.9	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	310		1.9	0.46	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	120		1.9	0.55	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LVN-6 (Continued) — Lab Sample ID: 320-63888-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	25		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		1.9	0.80	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.92	J	1.9	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.82	J	1.9	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.0		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.1	B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.4		1.9	0.51	ng/L	1		537 (modified)	Total/NA
6:2 FTS	87		19	1.9	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.9		2.0	0.83	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 320-63888-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	300		2.0	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	130		2.0	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	7.2		2.0	0.83	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.6	J	2.0	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.1	J	2.0	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.3		2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	J B	2.0	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.9		2.0	0.53	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	7.5		2.0	0.86	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	1900		39	9.6	ng/L	20		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	740		39	11	ng/L	20		537 (modified)	Total/NA
6:2 FTS - DL	1400		390	39	ng/L	20		537 (modified)	Total/NA

Client Sample ID: Storm Ceptor — Lab Sample ID: 320-63888-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	90		20	3.6	ng/L	10		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	560		20	5.0	ng/L	10		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	210		20	5.9	ng/L	10		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	43		20	2.6	ng/L	10		537 (modified)	Total/NA
6:2 FTS	73	J	200	20	ng/L	10		537 (modified)	Total/NA

Client Sample ID: FB 20200820 — Lab Sample ID: 320-63888-10

No Detections.

Client Sample ID: EB 20200820 — Lab Sample ID: 320-63888-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.33	J B	2.0	0.17	ng/L	1		537 (modified)	Total/NA

Client Sample ID: WCB Sump — Lab Sample ID: 320-63888-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.7		1.9	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	7.6		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.9		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.9		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		1.9	0.81	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WCB Sump (Continued) — Lab Sample ID: 320-63888-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	1.2	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.81	J	1.9	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.6		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	J B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.4		1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.98	J	1.9	0.33	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.3		2.0	0.84	ng/L	1		537 (modified)	Total/NA

Client Sample ID: WCB Sump FD — Lab Sample ID: 320-63888-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.8		1.9	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	8.2		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.9		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.9		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		1.9	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.2	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.75	J	1.9	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.4		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3	J B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.3		1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	1.2	J	1.9	0.34	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.3		2.0	0.85	ng/L	1		537 (modified)	Total/NA

Client Sample ID: BNT-8 — Lab Sample ID: 320-63888-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.3		1.9	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.4		1.9	0.46	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7		1.9	0.54	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.8	J	1.9	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.0		1.9	0.79	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.3		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.1	J	1.9	0.28	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.6	B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	13		1.9	0.50	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.61	J	1.9	0.33	ng/L	1		537 (modified)	Total/NA
Ammonium Perfluorooctanoate (APFO)	3.1		2.0	0.82	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: River Outlet

Date Collected: 08/20/20 09:00
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.3**		2.0	0.34	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluoropentanoic acid (PFPeA)	**1.5**	**J**	2.0	0.48	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorohexanoic acid (PFHxA)	**1.3**	**J**	2.0	0.57	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluoroheptanoic acid (PFHpA)	**0.81**	**J**	2.0	0.24	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorooctanoic acid (PFOA)	**1.2**	**J**	2.0	0.83	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorononanoic acid (PFNA)	**0.34**	**J**	2.0	0.26	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0	0.30	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	0.54	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		2.0	0.28	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.87		2.0	0.87	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorobutanesulfonic acid (PFBS)	**1.0**	**J**	2.0	0.20	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.45		2.0	0.45	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		2.0	0.29	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorohexanesulfonic acid (PFHxS)	**0.98**	**J B**	2.0	0.17	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorooctanesulfonic acid (PFOS)	<0.53		2.0	0.53	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorooctanesulfonamide (FOSA)	**0.51**	**J**	2.0	0.34	ng/L		08/26/20 18:43	08/27/20 17:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		20	3.0	ng/L		08/26/20 18:43	08/27/20 17:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		08/26/20 18:43	08/27/20 17:50	1
4:2 FTS	<5.1		20	5.1	ng/L		08/26/20 18:43	08/27/20 17:50	1
6:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 17:50	1
8:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 17:50	1
10:2 FTS	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 17:50	1
NEtFOSA	<0.85		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 17:50	1
NMeFOSA	<0.42		2.0	0.42	ng/L		08/26/20 18:43	08/27/20 17:50	1
Perfluorododecanesulfonic acid (PFDoS)	<0.44		2.0	0.44	ng/L		08/26/20 18:43	08/27/20 17:50	1
NMeFOSE	<1.4		3.9	1.4	ng/L		08/26/20 18:43	08/27/20 17:50	1
NEtFOSE	<0.83		2.0	0.83	ng/L		08/26/20 18:43	08/27/20 17:50	1
ADONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 17:50	1
F-53B Major	<0.23		2.0	0.23	ng/L		08/26/20 18:43	08/27/20 17:50	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		08/26/20 18:43	08/27/20 17:50	1
F-53B Minor	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 17:50	1
NaDONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 17:50	1
DONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 17:50	1
Ammonium Perfluorooctanoate (APFO)	**1.2**	**J**	2.1	0.86	ng/L		08/26/20 18:43	08/27/20 17:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*64*		*25 - 150*	*08/26/20 18:43*	*08/27/20 17:50*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: River Outlet
Date Collected: 08/20/20 09:00
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-1
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	99		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C2 PFHxA	108		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C4 PFHpA	107		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C4 PFOA	103		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C5 PFNA	113		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C2 PFDA	106		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C2 PFHxDA	57		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C2 PFUnA	102		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C2 PFDoA	98		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C2 PFTeDA	66		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C3 PFBS	100		25 - 150	08/26/20 18:43	08/27/20 17:50	1
18O2 PFHxS	103		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C4 PFOS	103		25 - 150	08/26/20 18:43	08/27/20 17:50	1
13C8 FOSA	108		25 - 150	08/26/20 18:43	08/27/20 17:50	1
d3-NMeFOSAA	107		25 - 150	08/26/20 18:43	08/27/20 17:50	1
d5-NEtFOSAA	108		25 - 150	08/26/20 18:43	08/27/20 17:50	1
M2-6:2 FTS	137		25 - 150	08/26/20 18:43	08/27/20 17:50	1
M2-8:2 FTS	131		25 - 150	08/26/20 18:43	08/27/20 17:50	1
M2-4:2 FTS	141		25 - 150	08/26/20 18:43	08/27/20 17:50	1
d-N-MeFOSA-M	89		20 - 150	08/26/20 18:43	08/27/20 17:50	1
d-N-EtFOSA-M	66		20 - 150	08/26/20 18:43	08/27/20 17:50	1
d7-N-MeFOSE-M	42		10 - 120	08/26/20 18:43	08/27/20 17:50	1
d9-N-EtFOSE-M	40		10 - 120	08/26/20 18:43	08/27/20 17:50	1
13C3 HFPO-DA	98		25 - 150	08/26/20 18:43	08/27/20 17:50	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: Blount St. Outlet

Date Collected: 08/20/20 09:20
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.4**		1.9	0.34	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluoropentanoic acid (PFPeA)	**3.2**		1.9	0.47	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorohexanoic acid (PFHxA)	**3.4**		1.9	0.56	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluoroheptanoic acid (PFHpA)	**1.7**	**J**	1.9	0.24	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorooctanoic acid (PFOA)	**3.0**		1.9	0.82	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorononanoic acid (PFNA)	**0.51**	**J**	1.9	0.26	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorotridecanoic acid (PFTriA)	<1.3		1.9	1.3	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		1.9	0.28	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.86		1.9	0.86	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorobutanesulfonic acid (PFBS)	**2.0**		1.9	0.19	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.44		1.9	0.44	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluoropentanesulfonic acid (PFPeS)	**1.1**	**J**	1.9	0.29	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorohexanesulfonic acid (PFHxS)	**8.5**	**B**	1.9	0.16	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorooctanesulfonic acid (PFOS)	**13**		1.9	0.52	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorooctanesulfonamide (FOSA)	**0.78**	**J**	1.9	0.34	ng/L		08/26/20 18:43	08/27/20 17:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		19	3.0	ng/L		08/26/20 18:43	08/27/20 17:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		08/26/20 18:43	08/27/20 17:59	1
4:2 FTS	<5.0		19	5.0	ng/L		08/26/20 18:43	08/27/20 17:59	1
6:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 17:59	1
8:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 17:59	1
10:2 FTS	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 17:59	1
NEtFOSA	<0.84		1.9	0.84	ng/L		08/26/20 18:43	08/27/20 17:59	1
NMeFOSA	<0.41		1.9	0.41	ng/L		08/26/20 18:43	08/27/20 17:59	1
Perfluorododecanesulfonic acid (PFDoS)	<0.43		1.9	0.43	ng/L		08/26/20 18:43	08/27/20 17:59	1
NMeFOSE	<1.3		3.9	1.3	ng/L		08/26/20 18:43	08/27/20 17:59	1
NEtFOSE	<0.82		1.9	0.82	ng/L		08/26/20 18:43	08/27/20 17:59	1
ADONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 17:59	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/26/20 18:43	08/27/20 17:59	1
HFPO-DA (GenX)	<1.4		3.9	1.4	ng/L		08/26/20 18:43	08/27/20 17:59	1
F-53B Minor	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/27/20 17:59	1
NaDONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 17:59	1
DONA	<0.17		1.9	0.17	ng/L		08/26/20 18:43	08/27/20 17:59	1
Ammonium Perfluorooctanoate (APFO)	**3.1**		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 17:59	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: Blount St. Outlet
Date Collected: 08/20/20 09:20
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-2
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	60		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C5 PFPeA	97		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C2 PFHxA	108		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C4 PFHpA	104		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C4 PFOA	99		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C5 PFNA	112		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C2 PFDA	108		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C2 PFHxDA	49		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C2 PFUnA	99		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C2 PFDoA	89		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C2 PFTeDA	58		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C3 PFBS	100		25 - 150	08/26/20 18:43	08/27/20 17:59	1
18O2 PFHxS	103		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C4 PFOS	105		25 - 150	08/26/20 18:43	08/27/20 17:59	1
13C8 FOSA	106		25 - 150	08/26/20 18:43	08/27/20 17:59	1
d3-NMeFOSAA	102		25 - 150	08/26/20 18:43	08/27/20 17:59	1
d5-NEtFOSAA	102		25 - 150	08/26/20 18:43	08/27/20 17:59	1
M2-6:2 FTS	142		25 - 150	08/26/20 18:43	08/27/20 17:59	1
M2-8:2 FTS	131		25 - 150	08/26/20 18:43	08/27/20 17:59	1
M2-4:2 FTS	141		25 - 150	08/26/20 18:43	08/27/20 17:59	1
d-N-MeFOSA-M	79		20 - 150	08/26/20 18:43	08/27/20 17:59	1
d-N-EtFOSA-M	59		20 - 150	08/26/20 18:43	08/27/20 17:59	1
d7-N-MeFOSE-M	44		10 - 120	08/26/20 18:43	08/27/20 17:59	1
d9-N-EtFOSE-M	40		10 - 120	08/26/20 18:43	08/27/20 17:59	1
13C3 HFPO-DA	97		25 - 150	08/26/20 18:43	08/27/20 17:59	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: Blount St. Outlet FD

Date Collected: 08/20/20 09:20
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.3**		2.0	0.35	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluoropentanoic acid (PFPeA)	**3.2**		2.0	0.49	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorohexanoic acid (PFHxA)	**3.5**		2.0	0.58	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluoroheptanoic acid (PFHpA)	**1.7**	**J**	2.0	0.25	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorooctanoic acid (PFOA)	**3.2**		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorononanoic acid (PFNA)	**0.38**	**J**	2.0	0.27	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorotetradecanoic acid (PFTeA)	<0.29		2.0	0.29	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorobutanesulfonic acid (PFBS)	**2.0**		2.0	0.20	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.46		2.0	0.46	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluoropentanesulfonic acid (PFPeS)	**1.3**	**J**	2.0	0.30	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorohexanesulfonic acid (PFHxS)	**8.6**	**B**	2.0	0.17	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorooctanesulfonic acid (PFOS)	**14**		2.0	0.54	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorooctanesulfonamide (FOSA)	**0.42**	**J**	2.0	0.35	ng/L		08/26/20 18:43	08/27/20 18:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.1		20	3.1	ng/L		08/26/20 18:43	08/27/20 18:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		08/26/20 18:43	08/27/20 18:08	1
4:2 FTS	<5.2		20	5.2	ng/L		08/26/20 18:43	08/27/20 18:08	1
6:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 18:08	1
8:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 18:08	1
10:2 FTS	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 18:08	1
NEtFOSA	<0.87		2.0	0.87	ng/L		08/26/20 18:43	08/27/20 18:08	1
NMeFOSA	<0.43		2.0	0.43	ng/L		08/26/20 18:43	08/27/20 18:08	1
Perfluorododecanesulfonic acid (PFDoS)	<0.45		2.0	0.45	ng/L		08/26/20 18:43	08/27/20 18:08	1
NMeFOSE	<1.4		4.0	1.4	ng/L		08/26/20 18:43	08/27/20 18:08	1
NEtFOSE	<0.85		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 18:08	1
ADONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 18:08	1
F-53B Major	<0.24		2.0	0.24	ng/L		08/26/20 18:43	08/27/20 18:08	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		08/26/20 18:43	08/27/20 18:08	1
F-53B Minor	<0.32		2.0	0.32	ng/L		08/26/20 18:43	08/27/20 18:08	1
NaDONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 18:08	1
DONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 18:08	1
Ammonium Perfluorooctanoate (APFO)	**3.3**		2.1	0.88	ng/L		08/26/20 18:43	08/27/20 18:08	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: Blount St. Outlet FD
Date Collected: 08/20/20 09:20
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-3
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	65		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C5 PFPeA	100		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C2 PFHxA	109		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C4 PFHpA	105		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C4 PFOA	101		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C5 PFNA	116		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C2 PFDA	105		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C2 PFHxDA	48		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C2 PFUnA	103		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C2 PFDoA	88		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C2 PFTeDA	52		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C3 PFBS	101		25 - 150	08/26/20 18:43	08/27/20 18:08	1
18O2 PFHxS	106		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C4 PFOS	101		25 - 150	08/26/20 18:43	08/27/20 18:08	1
13C8 FOSA	106		25 - 150	08/26/20 18:43	08/27/20 18:08	1
d3-NMeFOSAA	103		25 - 150	08/26/20 18:43	08/27/20 18:08	1
d5-NEtFOSAA	105		25 - 150	08/26/20 18:43	08/27/20 18:08	1
M2-6:2 FTS	137		25 - 150	08/26/20 18:43	08/27/20 18:08	1
M2-8:2 FTS	132		25 - 150	08/26/20 18:43	08/27/20 18:08	1
M2-4:2 FTS	142		25 - 150	08/26/20 18:43	08/27/20 18:08	1
d-N-MeFOSA-M	83		20 - 150	08/26/20 18:43	08/27/20 18:08	1
d-N-EtFOSA-M	59		20 - 150	08/26/20 18:43	08/27/20 18:08	1
d7-N-MeFOSE-M	51		10 - 120	08/26/20 18:43	08/27/20 18:08	1
d9-N-EtFOSE-M	42		10 - 120	08/26/20 18:43	08/27/20 18:08	1
13C3 HFPO-DA	100		25 - 150	08/26/20 18:43	08/27/20 18:08	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: Path Outlet

Date Collected: 08/20/20 09:40
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.6**		2.0	0.34	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluoropentanoic acid (PFPeA)	**3.3**		2.0	0.48	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorohexanoic acid (PFHxA)	**3.6**		2.0	0.57	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluoroheptanoic acid (PFHpA)	**1.8**	**J**	2.0	0.25	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorooctanoic acid (PFOA)	**3.1**		2.0	0.83	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorononanoic acid (PFNA)	**0.61**	**J**	2.0	0.26	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0	0.30	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	0.54	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		2.0	0.28	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.87		2.0	0.87	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorobutanesulfonic acid (PFBS)	**2.1**		2.0	0.20	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.45		2.0	0.45	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluoropentanesulfonic acid (PFPeS)	**1.2**	**J**	2.0	0.29	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorohexanesulfonic acid (PFHxS)	**8.4**	**B**	2.0	0.17	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorooctanesulfonic acid (PFOS)	**16**		2.0	0.53	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorooctanesulfonamide (FOSA)	**0.88**	**J**	2.0	0.34	ng/L		08/26/20 18:43	08/27/20 18:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		20	3.0	ng/L		08/26/20 18:43	08/27/20 18:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		08/26/20 18:43	08/27/20 18:17	1
4:2 FTS	<5.1		20	5.1	ng/L		08/26/20 18:43	08/27/20 18:17	1
6:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 18:17	1
8:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 18:17	1
10:2 FTS	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 18:17	1
NEtFOSA	<0.85		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 18:17	1
NMeFOSA	<0.42		2.0	0.42	ng/L		08/26/20 18:43	08/27/20 18:17	1
Perfluorododecanesulfonic acid (PFDoS)	<0.44		2.0	0.44	ng/L		08/26/20 18:43	08/27/20 18:17	1
NMeFOSE	<1.4		3.9	1.4	ng/L		08/26/20 18:43	08/27/20 18:17	1
NEtFOSE	<0.83		2.0	0.83	ng/L		08/26/20 18:43	08/27/20 18:17	1
ADONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 18:17	1
F-53B Major	<0.24		2.0	0.24	ng/L		08/26/20 18:43	08/27/20 18:17	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		08/26/20 18:43	08/27/20 18:17	1
F-53B Minor	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 18:17	1
NaDONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 18:17	1
DONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 18:17	1
Ammonium Perfluorooctanoate (APFO)	**3.3**		2.1	0.86	ng/L		08/26/20 18:43	08/27/20 18:17	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: Path Outlet

Date Collected: 08/20/20 09:40
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-4

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	58		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C5 PFPeA	96		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C2 PFHxA	106		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C4 PFHpA	104		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C4 PFOA	102		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C5 PFNA	113		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C2 PFDA	107		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C2 PFHxDA	54		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C2 PFUnA	104		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C2 PFDoA	91		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C2 PFTeDA	61		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C3 PFBS	95		25 - 150	08/26/20 18:43	08/27/20 18:17	1
18O2 PFHxS	101		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C4 PFOS	99		25 - 150	08/26/20 18:43	08/27/20 18:17	1
13C8 FOSA	105		25 - 150	08/26/20 18:43	08/27/20 18:17	1
d3-NMeFOSAA	101		25 - 150	08/26/20 18:43	08/27/20 18:17	1
d5-NEtFOSAA	104		25 - 150	08/26/20 18:43	08/27/20 18:17	1
M2-6:2 FTS	137		25 - 150	08/26/20 18:43	08/27/20 18:17	1
M2-8:2 FTS	135		25 - 150	08/26/20 18:43	08/27/20 18:17	1
M2-4:2 FTS	141		25 - 150	08/26/20 18:43	08/27/20 18:17	1
d-N-MeFOSA-M	79		20 - 150	08/26/20 18:43	08/27/20 18:17	1
d-N-EtFOSA-M	57		20 - 150	08/26/20 18:43	08/27/20 18:17	1
d7-N-MeFOSE-M	43		10 - 120	08/26/20 18:43	08/27/20 18:17	1
d9-N-EtFOSE-M	37		10 - 120	08/26/20 18:43	08/27/20 18:17	1
13C3 HFPO-DA	97		25 - 150	08/26/20 18:43	08/27/20 18:17	1

Client Sample ID: BNT-3
Date Collected: 08/20/20 09:50
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-5
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.7**		1.9	0.34	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluoropentanoic acid (PFPeA)	**4.2**		1.9	0.47	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorohexanoic acid (PFHxA)	**3.9**		1.9	0.56	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluoroheptanoic acid (PFHpA)	**1.8**	**J**	1.9	0.24	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorooctanoic acid (PFOA)	**3.2**		1.9	0.82	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorononanoic acid (PFNA)	**0.92**	**J**	1.9	0.26	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		1.9	0.28	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.85		1.9	0.85	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorobutanesulfonic acid (PFBS)	**2.1**		1.9	0.19	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.44		1.9	0.44	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluoropentanesulfonic acid (PFPeS)	**1.3**	**J**	1.9	0.29	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorohexanesulfonic acid (PFHxS)	**8.2**	**B**	1.9	0.16	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorooctanesulfonic acid (PFOS)	**14**		1.9	0.52	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorooctanesulfonamide (FOSA)	**0.37**	**J**	1.9	0.34	ng/L		08/26/20 18:43	08/27/20 18:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		19	3.0	ng/L		08/26/20 18:43	08/27/20 18:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		08/26/20 18:43	08/27/20 18:27	1
4:2 FTS	<5.0		19	5.0	ng/L		08/26/20 18:43	08/27/20 18:27	1
6:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 18:27	1
8:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 18:27	1
10:2 FTS	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 18:27	1
NEtFOSA	<0.83		1.9	0.83	ng/L		08/26/20 18:43	08/27/20 18:27	1
NMeFOSA	<0.41		1.9	0.41	ng/L		08/26/20 18:43	08/27/20 18:27	1
Perfluorododecanesulfonic acid (PFDoS)	<0.43		1.9	0.43	ng/L		08/26/20 18:43	08/27/20 18:27	1
NMeFOSE	<1.3		3.8	1.3	ng/L		08/26/20 18:43	08/27/20 18:27	1
NEtFOSE	<0.82		1.9	0.82	ng/L		08/26/20 18:43	08/27/20 18:27	1
ADONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 18:27	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/26/20 18:43	08/27/20 18:27	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		08/26/20 18:43	08/27/20 18:27	1
F-53B Minor	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/27/20 18:27	1
NaDONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 18:27	1
DONA	<0.17		1.9	0.17	ng/L		08/26/20 18:43	08/27/20 18:27	1
Ammonium Perfluorooctanoate (APFO)	**3.3**		2.0	0.84	ng/L		08/26/20 18:43	08/27/20 18:27	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: BNT-3
Date Collected: 08/20/20 09:50
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-5
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	73		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C5 PFPeA	95		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C2 PFHxA	107		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C4 PFHpA	104		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C4 PFOA	101		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C5 PFNA	111		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C2 PFDA	108		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C2 PFHxDA	52		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C2 PFUnA	114		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C2 PFDoA	109		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C2 PFTeDA	65		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C3 PFBS	98		25 - 150	08/26/20 18:43	08/27/20 18:27	1
18O2 PFHxS	102		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C4 PFOS	103		25 - 150	08/26/20 18:43	08/27/20 18:27	1
13C8 FOSA	110		25 - 150	08/26/20 18:43	08/27/20 18:27	1
d3-NMeFOSAA	129		25 - 150	08/26/20 18:43	08/27/20 18:27	1
d5-NEtFOSAA	133		25 - 150	08/26/20 18:43	08/27/20 18:27	1
M2-6:2 FTS	155	*5	25 - 150	08/26/20 18:43	08/27/20 18:27	1
M2-8:2 FTS	187	*5	25 - 150	08/26/20 18:43	08/27/20 18:27	1
M2-4:2 FTS	155	*5	25 - 150	08/26/20 18:43	08/27/20 18:27	1
d-N-MeFOSA-M	87		20 - 150	08/26/20 18:43	08/27/20 18:27	1
d-N-EtFOSA-M	73		20 - 150	08/26/20 18:43	08/27/20 18:27	1
d7-N-MeFOSE-M	73		10 - 120	08/26/20 18:43	08/27/20 18:27	1
d9-N-EtFOSE-M	63		10 - 120	08/26/20 18:43	08/27/20 18:27	1
13C3 HFPO-DA	96		25 - 150	08/26/20 18:43	08/27/20 18:27	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: BNT-4
Date Collected: 08/20/20 10:10
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-6
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.7**		1.9	0.33	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluoropentanoic acid (PFPeA)	**3.5**		1.9	0.46	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorohexanoic acid (PFHxA)	**3.7**		1.9	0.55	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluoroheptanoic acid (PFHpA)	**1.9**		1.9	0.24	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorooctanoic acid (PFOA)	**3.1**		1.9	0.80	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorononanoic acid (PFNA)	**0.56**	**J**	1.9	0.25	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorodecanoic acid (PFDA)	<0.29		1.9	0.29	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorododecanoic acid (PFDoA)	<0.52		1.9	0.52	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorotetradecanoic acid (PFTeA)	<0.27		1.9	0.27	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.84		1.9	0.84	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorobutanesulfonic acid (PFBS)	**2.5**		1.9	0.19	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.43		1.9	0.43	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluoropentanesulfonic acid (PFPeS)	**1.3**	**J**	1.9	0.28	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorohexanesulfonic acid (PFHxS)	**8.4**	**B**	1.9	0.16	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorooctanesulfonic acid (PFOS)	**13**		1.9	0.51	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorooctanesulfonamide (FOSA)	**0.89**	**J**	1.9	0.33	ng/L		08/26/20 18:43	08/27/20 18:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.9		19	2.9	ng/L		08/26/20 18:43	08/27/20 18:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		08/26/20 18:43	08/27/20 18:36	1
4:2 FTS	<4.9		19	4.9	ng/L		08/26/20 18:43	08/27/20 18:36	1
6:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 18:36	1
8:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 18:36	1
10:2 FTS	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 18:36	1
NEtFOSA	<0.82		1.9	0.82	ng/L		08/26/20 18:43	08/27/20 18:36	1
NMeFOSA	<0.41		1.9	0.41	ng/L		08/26/20 18:43	08/27/20 18:36	1
Perfluorododecanesulfonic acid (PFDoS)	<0.42		1.9	0.42	ng/L		08/26/20 18:43	08/27/20 18:36	1
NMeFOSE	<1.3		3.8	1.3	ng/L		08/26/20 18:43	08/27/20 18:36	1
NEtFOSE	<0.80		1.9	0.80	ng/L		08/26/20 18:43	08/27/20 18:36	1
ADONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 18:36	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/26/20 18:43	08/27/20 18:36	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		08/26/20 18:43	08/27/20 18:36	1
F-53B Minor	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/27/20 18:36	1
NaDONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 18:36	1
DONA	<0.17		1.9	0.17	ng/L		08/26/20 18:43	08/27/20 18:36	1
Ammonium Perfluorooctanoate (APFO)	**3.2**		2.0	0.83	ng/L		08/26/20 18:43	08/27/20 18:36	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: BNT-4
Date Collected: 08/20/20 10:10
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-6
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	57		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C5 PFPeA	89		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C2 PFHxA	102		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C4 PFHpA	105		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C4 PFOA	104		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C5 PFNA	117		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C2 PFDA	106		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C2 PFHxDA	47		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C2 PFUnA	104		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C2 PFDoA	94		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C2 PFTeDA	53		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C3 PFBS	93		25 - 150	08/26/20 18:43	08/27/20 18:36	1
18O2 PFHxS	103		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C4 PFOS	99		25 - 150	08/26/20 18:43	08/27/20 18:36	1
13C8 FOSA	103		25 - 150	08/26/20 18:43	08/27/20 18:36	1
d3-NMeFOSAA	106		25 - 150	08/26/20 18:43	08/27/20 18:36	1
d5-NEtFOSAA	106		25 - 150	08/26/20 18:43	08/27/20 18:36	1
M2-6:2 FTS	149		25 - 150	08/26/20 18:43	08/27/20 18:36	1
M2-8:2 FTS	143		25 - 150	08/26/20 18:43	08/27/20 18:36	1
M2-4:2 FTS	142		25 - 150	08/26/20 18:43	08/27/20 18:36	1
d-N-MeFOSA-M	89		20 - 150	08/26/20 18:43	08/27/20 18:36	1
d-N-EtFOSA-M	71		20 - 150	08/26/20 18:43	08/27/20 18:36	1
d7-N-MeFOSE-M	60		10 - 120	08/26/20 18:43	08/27/20 18:36	1
d9-N-EtFOSE-M	51		10 - 120	08/26/20 18:43	08/27/20 18:36	1
13C3 HFPO-DA	96		25 - 150	08/26/20 18:43	08/27/20 18:36	1

Client Sample ID: LVN-6
Date Collected: 08/20/20 10:25
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-7
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**54**		1.9	0.33	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluoropentanoic acid (PFPeA)	**310**		1.9	0.46	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorohexanoic acid (PFHxA)	**120**		1.9	0.55	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluoroheptanoic acid (PFHpA)	**25**		1.9	0.24	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorooctanoic acid (PFOA)	**3.8**		1.9	0.80	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorononanoic acid (PFNA)	**0.92**	**J**	1.9	0.25	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorodecanoic acid (PFDA)	**0.82**	**J**	1.9	0.29	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorododecanoic acid (PFDoA)	<0.52		1.9	0.52	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorotetradecanoic acid (PFTeA)	<0.27		1.9	0.27	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.84		1.9	0.84	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorobutanesulfonic acid (PFBS)	**3.0**		1.9	0.19	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.43		1.9	0.43	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.9	0.28	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorohexanesulfonic acid (PFHxS)	**2.1**	**B**	1.9	0.16	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorooctanesulfonic acid (PFOS)	**5.4**		1.9	0.51	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorooctanesulfonamide (FOSA)	<0.33		1.9	0.33	ng/L		08/26/20 18:43	08/27/20 18:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.9		19	2.9	ng/L		08/26/20 18:43	08/27/20 18:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		08/26/20 18:43	08/27/20 18:45	1
4:2 FTS	<4.9		19	4.9	ng/L		08/26/20 18:43	08/27/20 18:45	1
6:2 FTS	**87**		19	1.9	ng/L		08/26/20 18:43	08/27/20 18:45	1
8:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 18:45	1
10:2 FTS	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 18:45	1
NEtFOSA	<0.82		1.9	0.82	ng/L		08/26/20 18:43	08/27/20 18:45	1
NMeFOSA	<0.40		1.9	0.40	ng/L		08/26/20 18:43	08/27/20 18:45	1
Perfluorododecanesulfonic acid (PFDoS)	<0.42		1.9	0.42	ng/L		08/26/20 18:43	08/27/20 18:45	1
NMeFOSE	<1.3		3.8	1.3	ng/L		08/26/20 18:43	08/27/20 18:45	1
NEtFOSE	<0.80		1.9	0.80	ng/L		08/26/20 18:43	08/27/20 18:45	1
ADONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 18:45	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/26/20 18:43	08/27/20 18:45	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		08/26/20 18:43	08/27/20 18:45	1
F-53B Minor	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/27/20 18:45	1
NaDONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 18:45	1
DONA	<0.17		1.9	0.17	ng/L		08/26/20 18:43	08/27/20 18:45	1
Ammonium Perfluorooctanoate (APFO)	**3.9**		2.0	0.83	ng/L		08/26/20 18:43	08/27/20 18:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*61*		*25 - 150*	*08/26/20 18:43*	*08/27/20 18:45*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: LVN-6
Date Collected: 08/20/20 10:25
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-7
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	85		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C2 PFHxA	100		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C4 PFHpA	104		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C4 PFOA	103		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C5 PFNA	115		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C2 PFDA	111		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C2 PFHxDA	73		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C2 PFUnA	114		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C2 PFDoA	116		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C2 PFTeDA	87		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C3 PFBS	94		25 - 150	08/26/20 18:43	08/27/20 18:45	1
18O2 PFHxS	106		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C4 PFOS	103		25 - 150	08/26/20 18:43	08/27/20 18:45	1
13C8 FOSA	109		25 - 150	08/26/20 18:43	08/27/20 18:45	1
d3-NMeFOSAA	116		25 - 150	08/26/20 18:43	08/27/20 18:45	1
d5-NEtFOSAA	141		25 - 150	08/26/20 18:43	08/27/20 18:45	1
M2-6:2 FTS	174	*5	25 - 150	08/26/20 18:43	08/27/20 18:45	1
M2-8:2 FTS	196	*5	25 - 150	08/26/20 18:43	08/27/20 18:45	1
M2-4:2 FTS	146		25 - 150	08/26/20 18:43	08/27/20 18:45	1
d-N-MeFOSA-M	85		20 - 150	08/26/20 18:43	08/27/20 18:45	1
d-N-EtFOSA-M	70		20 - 150	08/26/20 18:43	08/27/20 18:45	1
d7-N-MeFOSE-M	63		10 - 120	08/26/20 18:43	08/27/20 18:45	1
d9-N-EtFOSE-M	60		10 - 120	08/26/20 18:43	08/27/20 18:45	1
13C3 HFPO-DA	98		25 - 150	08/26/20 18:43	08/27/20 18:45	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: MW-1
Date Collected: 08/20/20 11:35
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-8
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**300**		2.0	0.34	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluoroheptanoic acid (PFHpA)	**130**		2.0	0.24	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorooctanoic acid (PFOA)	**7.2**		2.0	0.83	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorononanoic acid (PFNA)	**1.6**	**J**	2.0	0.26	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorodecanoic acid (PFDA)	**1.1**	**J**	2.0	0.30	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	0.54	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		2.0	0.28	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.87		2.0	0.87	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorobutanesulfonic acid (PFBS)	**2.3**		2.0	0.20	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.45		2.0	0.45	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		2.0	0.29	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorohexanesulfonic acid (PFHxS)	**1.2**	**J B**	2.0	0.17	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorooctanesulfonic acid (PFOS)	**7.9**		2.0	0.53	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorooctanesulfonamide (FOSA)	<0.34		2.0	0.34	ng/L		08/26/20 18:43	08/27/20 19:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		20	3.0	ng/L		08/26/20 18:43	08/27/20 19:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		08/26/20 18:43	08/27/20 19:12	1
4:2 FTS	<5.1		20	5.1	ng/L		08/26/20 18:43	08/27/20 19:12	1
8:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 19:12	1
10:2 FTS	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 19:12	1
NEtFOSA	<0.85		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 19:12	1
NMeFOSA	<0.42		2.0	0.42	ng/L		08/26/20 18:43	08/27/20 19:12	1
Perfluorododecanesulfonic acid (PFDoS)	<0.44		2.0	0.44	ng/L		08/26/20 18:43	08/27/20 19:12	1
NMeFOSE	<1.4		3.9	1.4	ng/L		08/26/20 18:43	08/27/20 19:12	1
NEtFOSE	<0.83		2.0	0.83	ng/L		08/26/20 18:43	08/27/20 19:12	1
ADONA	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 19:12	1
F-53B Major	<0.23		2.0	0.23	ng/L		08/26/20 18:43	08/27/20 19:12	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		08/26/20 18:43	08/27/20 19:12	1
F-53B Minor	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 19:12	1
NaDONA	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 19:12	1
DONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 19:12	1
Ammonium Perfluorooctanoate (APFO)	**7.5**		2.0	0.86	ng/L		08/26/20 18:43	08/27/20 19:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*60*		*25 - 150*	*08/26/20 18:43*	*08/27/20 19:12*	*1*
13C4 PFHpA	*107*		*25 - 150*	*08/26/20 18:43*	*08/27/20 19:12*	*1*
13C4 PFOA	*105*		*25 - 150*	*08/26/20 18:43*	*08/27/20 19:12*	*1*
13C5 PFNA	*128*		*25 - 150*	*08/26/20 18:43*	*08/27/20 19:12*	*1*

Client Sample ID: MW-1
Date Collected: 08/20/20 11:35
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-8
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	118		25 - 150	08/26/20 18:43	08/27/20 19:12	1
13C2 PFHxDA	102		25 - 150	08/26/20 18:43	08/27/20 19:12	1
13C2 PFUnA	113		25 - 150	08/26/20 18:43	08/27/20 19:12	1
13C2 PFDoA	119		25 - 150	08/26/20 18:43	08/27/20 19:12	1
13C2 PFTeDA	92		25 - 150	08/26/20 18:43	08/27/20 19:12	1
13C3 PFBS	94		25 - 150	08/26/20 18:43	08/27/20 19:12	1
18O2 PFHxS	110		25 - 150	08/26/20 18:43	08/27/20 19:12	1
13C4 PFOS	114		25 - 150	08/26/20 18:43	08/27/20 19:12	1
13C8 FOSA	117		25 - 150	08/26/20 18:43	08/27/20 19:12	1
d3-NMeFOSAA	120		25 - 150	08/26/20 18:43	08/27/20 19:12	1
d5-NEtFOSAA	132		25 - 150	08/26/20 18:43	08/27/20 19:12	1
M2-8:2 FTS	207	*5	25 - 150	08/26/20 18:43	08/27/20 19:12	1
M2-4:2 FTS	130		25 - 150	08/26/20 18:43	08/27/20 19:12	1
d-N-MeFOSA-M	80		20 - 150	08/26/20 18:43	08/27/20 19:12	1
d-N-EtFOSA-M	65		20 - 150	08/26/20 18:43	08/27/20 19:12	1
d7-N-MeFOSE-M	66		10 - 120	08/26/20 18:43	08/27/20 19:12	1
d9-N-EtFOSE-M	55		10 - 120	08/26/20 18:43	08/27/20 19:12	1
13C3 HFPO-DA	102		25 - 150	08/26/20 18:43	08/27/20 19:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	1900		39	9.6	ng/L		08/26/20 18:43	08/28/20 12:43	20
Perfluorohexanoic acid (PFHxA)	740		39	11	ng/L		08/26/20 18:43	08/28/20 12:43	20
6:2 FTS	1400		390	39	ng/L		08/26/20 18:43	08/28/20 12:43	20

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	110		25 - 150	08/26/20 18:43	08/28/20 12:43	20
13C2 PFHxA	108		25 - 150	08/26/20 18:43	08/28/20 12:43	20
M2-6:2 FTS	124		25 - 150	08/26/20 18:43	08/28/20 12:43	20

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: Storm Ceptor

Date Collected: 08/20/20 12:00
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-9

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**90**		20	3.6	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluoropentanoic acid (PFPeA)	**560**		20	5.0	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorohexanoic acid (PFHxA)	**210**		20	5.9	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluoroheptanoic acid (PFHpA)	**43**		20	2.6	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorooctanoic acid (PFOA)	<8.7		20	8.7	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorononanoic acid (PFNA)	<2.8		20	2.8	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorodecanoic acid (PFDA)	<3.2		20	3.2	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluoroundecanoic acid (PFUnA)	<11		20	11	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorododecanoic acid (PFDoA)	<5.6		20	5.6	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorotridecanoic acid (PFTriA)	<13		20	13	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorotetradecanoic acid (PFTeA)	<3.0		20	3.0	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluoro-n-hexadecanoic acid (PFHxDA)	<9.1		20	9.1	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorobutanesulfonic acid (PFBS)	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluoro-n-octadecanoic acid (PFODA)	<4.7		20	4.7	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluoropentanesulfonic acid (PFPeS)	<3.1		20	3.1	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorohexanesulfonic acid (PFHxS)	<1.7		20	1.7	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluoroheptanesulfonic Acid (PFHpS)	<1.9		20	1.9	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorooctanesulfonic acid (PFOS)	<5.5		20	5.5	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorononanesulfonic acid (PFNS)	<1.6		20	1.6	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorodecanesulfonic acid (PFDS)	<3.3		20	3.3	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorooctanesulfonamide (FOSA)	<3.6		20	3.6	ng/L		08/26/20 18:43	08/27/20 20:16	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<32		200	32	ng/L		08/26/20 18:43	08/27/20 20:16	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<19		200	19	ng/L		08/26/20 18:43	08/27/20 20:16	10
4:2 FTS	<53		200	53	ng/L		08/26/20 18:43	08/27/20 20:16	10
6:2 FTS	**73**	**J**	200	20	ng/L		08/26/20 18:43	08/27/20 20:16	10
8:2 FTS	<20		200	20	ng/L		08/26/20 18:43	08/27/20 20:16	10
10:2 FTS	<1.9		20	1.9	ng/L		08/26/20 18:43	08/27/20 20:16	10
NEtFOSA	<8.9		20	8.9	ng/L		08/26/20 18:43	08/27/20 20:16	10
NMeFOSA	<4.4		20	4.4	ng/L		08/26/20 18:43	08/27/20 20:16	10
Perfluorododecanesulfonic acid (PFDoS)	<4.6		20	4.6	ng/L		08/26/20 18:43	08/27/20 20:16	10
NMeFOSE	<14		41	14	ng/L		08/26/20 18:43	08/27/20 20:16	10
NEtFOSE	<8.7		20	8.7	ng/L		08/26/20 18:43	08/27/20 20:16	10
ADONA	<1.9		21	1.9	ng/L		08/26/20 18:43	08/27/20 20:16	10
F-53B Major	<2.5		20	2.5	ng/L		08/26/20 18:43	08/27/20 20:16	10
HFPO-DA (GenX)	<15		41	15	ng/L		08/26/20 18:43	08/27/20 20:16	10
F-53B Minor	<3.3		20	3.3	ng/L		08/26/20 18:43	08/27/20 20:16	10
NaDONA	<1.9		21	1.9	ng/L		08/26/20 18:43	08/27/20 20:16	10
DONA	<1.8		20	1.8	ng/L		08/26/20 18:43	08/27/20 20:16	10
Ammonium Perfluorooctanoate (APFO)	<9.0		21	9.0	ng/L		08/26/20 18:43	08/27/20 20:16	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*96*		*25 - 150*	*08/26/20 18:43*	*08/27/20 20:16*	*10*
13C5 PFPeA	*108*		*25 - 150*	*08/26/20 18:43*	*08/27/20 20:16*	*10*
13C2 PFHxA	*108*		*25 - 150*	*08/26/20 18:43*	*08/27/20 20:16*	*10*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: Storm Ceptor
Date Collected: 08/20/20 12:00
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-9
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	105		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C4 PFOA	104		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C5 PFNA	111		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C2 PFDA	109		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C2 PFHxDA	103		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C2 PFUnA	110		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C2 PFDoA	107		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C2 PFTeDA	93		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C3 PFBS	105		25 - 150	08/26/20 18:43	08/27/20 20:16	10
18O2 PFHxS	111		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C4 PFOS	104		25 - 150	08/26/20 18:43	08/27/20 20:16	10
13C8 FOSA	111		25 - 150	08/26/20 18:43	08/27/20 20:16	10
d3-NMeFOSAA	115		25 - 150	08/26/20 18:43	08/27/20 20:16	10
d5-NEtFOSAA	118		25 - 150	08/26/20 18:43	08/27/20 20:16	10
M2-6:2 FTS	134		25 - 150	08/26/20 18:43	08/27/20 20:16	10
M2-8:2 FTS	124		25 - 150	08/26/20 18:43	08/27/20 20:16	10
M2-4:2 FTS	119		25 - 150	08/26/20 18:43	08/27/20 20:16	10
d-N-MeFOSA-M	80		20 - 150	08/26/20 18:43	08/27/20 20:16	10
d-N-EtFOSA-M	71		20 - 150	08/26/20 18:43	08/27/20 20:16	10
d7-N-MeFOSE-M	72		10 - 120	08/26/20 18:43	08/27/20 20:16	10
d9-N-EtFOSE-M	67		10 - 120	08/26/20 18:43	08/27/20 20:16	10
13C3 HFPO-DA	102		25 - 150	08/26/20 18:43	08/27/20 20:16	10

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: FB 20200820

Date Collected: 08/20/20 12:40
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-10

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.34		1.9	0.34	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluoropentanoic acid (PFPeA)	<0.47		1.9	0.47	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorohexanoic acid (PFHxA)	<0.56		1.9	0.56	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluoroheptanoic acid (PFHpA)	<0.24		1.9	0.24	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorooctanoic acid (PFOA)	<0.82		1.9	0.82	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorononanoic acid (PFNA)	<0.26		1.9	0.26	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		1.9	0.28	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.85		1.9	0.85	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.44		1.9	0.44	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorohexanesulfonic acid (PFHxS)	<0.16		1.9	0.16	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorooctanesulfonic acid (PFOS)	<0.52		1.9	0.52	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorooctanesulfonamide (FOSA)	<0.34		1.9	0.34	ng/L		08/26/20 18:43	08/28/20 12:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		19	3.0	ng/L		08/26/20 18:43	08/28/20 12:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		08/26/20 18:43	08/28/20 12:34	1
4:2 FTS	<5.0		19	5.0	ng/L		08/26/20 18:43	08/28/20 12:34	1
6:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/28/20 12:34	1
8:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/28/20 12:34	1
10:2 FTS	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/28/20 12:34	1
NEtFOSA	<0.84		1.9	0.84	ng/L		08/26/20 18:43	08/28/20 12:34	1
NMeFOSA	<0.41		1.9	0.41	ng/L		08/26/20 18:43	08/28/20 12:34	1
Perfluorododecanesulfonic acid (PFDoS)	<0.43		1.9	0.43	ng/L		08/26/20 18:43	08/28/20 12:34	1
NMeFOSE	<1.3		3.8	1.3	ng/L		08/26/20 18:43	08/28/20 12:34	1
NEtFOSE	<0.82		1.9	0.82	ng/L		08/26/20 18:43	08/28/20 12:34	1
ADONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/28/20 12:34	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/26/20 18:43	08/28/20 12:34	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		08/26/20 18:43	08/28/20 12:34	1
F-53B Minor	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/28/20 12:34	1
NaDONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/28/20 12:34	1
DONA	<0.17		1.9	0.17	ng/L		08/26/20 18:43	08/28/20 12:34	1
Ammonium Perfluorooctanoate (APFO)	<0.85		2.0	0.85	ng/L		08/26/20 18:43	08/28/20 12:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*102*		*25 - 150*	*08/26/20 18:43*	*08/28/20 12:34*	*1*
13C5 PFPeA	*108*		*25 - 150*	*08/26/20 18:43*	*08/28/20 12:34*	*1*
13C2 PFHxA	*105*		*25 - 150*	*08/26/20 18:43*	*08/28/20 12:34*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: FB 20200820
Date Collected: 08/20/20 12:40
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-10
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	106		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C4 PFOA	104		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C5 PFNA	114		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C2 PFDA	117		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C2 PFHxDA	117		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C2 PFUnA	116		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C2 PFDoA	128		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C2 PFTeDA	104		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C3 PFBS	109		25 - 150	08/26/20 18:43	08/28/20 12:34	1
18O2 PFHxS	111		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C4 PFOS	111		25 - 150	08/26/20 18:43	08/28/20 12:34	1
13C8 FOSA	107		25 - 150	08/26/20 18:43	08/28/20 12:34	1
d3-NMeFOSAA	110		25 - 150	08/26/20 18:43	08/28/20 12:34	1
d5-NEtFOSAA	114		25 - 150	08/26/20 18:43	08/28/20 12:34	1
M2-6:2 FTS	119		25 - 150	08/26/20 18:43	08/28/20 12:34	1
M2-8:2 FTS	119		25 - 150	08/26/20 18:43	08/28/20 12:34	1
M2-4:2 FTS	113		25 - 150	08/26/20 18:43	08/28/20 12:34	1
d-N-MeFOSA-M	90		20 - 150	08/26/20 18:43	08/28/20 12:34	1
d-N-EtFOSA-M	57		20 - 150	08/26/20 18:43	08/28/20 12:34	1
d7-N-MeFOSE-M	36		10 - 120	08/26/20 18:43	08/28/20 12:34	1
d9-N-EtFOSE-M	29		10 - 120	08/26/20 18:43	08/28/20 12:34	1
13C3 HFPO-DA	99		25 - 150	08/26/20 18:43	08/28/20 12:34	1

Client Sample ID: EB 20200820

Date Collected: 08/20/20 12:50
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-11

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.34		2.0	0.34	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluoropentanoic acid (PFPeA)	<0.48		2.0	0.48	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorohexanoic acid (PFHxA)	<0.57		2.0	0.57	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorooctanoic acid (PFOA)	<0.84		2.0	0.84	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0	0.30	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	0.54	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorotetradecanoic acid (PFTeA)	<0.29		2.0	0.29	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.88		2.0	0.88	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.45		2.0	0.45	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorohexanesulfonic acid (PFHxS)	**0.33**	**J B**	2.0	0.17	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorooctanesulfonic acid (PFOS)	<0.53		2.0	0.53	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorooctanesulfonamide (FOSA)	<0.34		2.0	0.34	ng/L		08/26/20 18:43	08/27/20 19:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		20	3.0	ng/L		08/26/20 18:43	08/27/20 19:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		08/26/20 18:43	08/27/20 19:30	1
4:2 FTS	<5.1		20	5.1	ng/L		08/26/20 18:43	08/27/20 19:30	1
6:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 19:30	1
8:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 19:30	1
10:2 FTS	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 19:30	1
NEtFOSA	<0.86		2.0	0.86	ng/L		08/26/20 18:43	08/27/20 19:30	1
NMeFOSA	<0.42		2.0	0.42	ng/L		08/26/20 18:43	08/27/20 19:30	1
Perfluorododecanesulfonic acid (PFDoS)	<0.44		2.0	0.44	ng/L		08/26/20 18:43	08/27/20 19:30	1
NMeFOSE	<1.4		3.9	1.4	ng/L		08/26/20 18:43	08/27/20 19:30	1
NEtFOSE	<0.84		2.0	0.84	ng/L		08/26/20 18:43	08/27/20 19:30	1
ADONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 19:30	1
F-53B Major	<0.24		2.0	0.24	ng/L		08/26/20 18:43	08/27/20 19:30	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		08/26/20 18:43	08/27/20 19:30	1
F-53B Minor	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 19:30	1
NaDONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 19:30	1
DONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 19:30	1
Ammonium Perfluorooctanoate (APFO)	<0.87		2.1	0.87	ng/L		08/26/20 18:43	08/27/20 19:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*89*		*25 - 150*	*08/26/20 18:43*	*08/27/20 19:30*	*1*
13C5 PFPeA	*109*		*25 - 150*	*08/26/20 18:43*	*08/27/20 19:30*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: EB 20200820
Date Collected: 08/20/20 12:50
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-11
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	110		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C4 PFHpA	107		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C4 PFOA	106		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C5 PFNA	115		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C2 PFDA	110		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C2 PFHxDA	116		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C2 PFUnA	113		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C2 PFDoA	113		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C2 PFTeDA	111		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C3 PFBS	109		25 - 150	08/26/20 18:43	08/27/20 19:30	1
18O2 PFHxS	109		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C4 PFOS	109		25 - 150	08/26/20 18:43	08/27/20 19:30	1
13C8 FOSA	107		25 - 150	08/26/20 18:43	08/27/20 19:30	1
d3-NMeFOSAA	113		25 - 150	08/26/20 18:43	08/27/20 19:30	1
d5-NEtFOSAA	114		25 - 150	08/26/20 18:43	08/27/20 19:30	1
M2-6:2 FTS	113		25 - 150	08/26/20 18:43	08/27/20 19:30	1
M2-8:2 FTS	117		25 - 150	08/26/20 18:43	08/27/20 19:30	1
M2-4:2 FTS	112		25 - 150	08/26/20 18:43	08/27/20 19:30	1
d-N-MeFOSA-M	93		20 - 150	08/26/20 18:43	08/27/20 19:30	1
d-N-EtFOSA-M	61		20 - 150	08/26/20 18:43	08/27/20 19:30	1
d7-N-MeFOSE-M	39		10 - 120	08/26/20 18:43	08/27/20 19:30	1
d9-N-EtFOSE-M	31		10 - 120	08/26/20 18:43	08/27/20 19:30	1
13C3 HFPO-DA	103		25 - 150	08/26/20 18:43	08/27/20 19:30	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: WCB Sump
Date Collected: 08/20/20 13:25
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-12
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**8.7**		1.9	0.33	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluoropentanoic acid (PFPeA)	**7.6**		1.9	0.47	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorohexanoic acid (PFHxA)	**3.9**		1.9	0.56	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluoroheptanoic acid (PFHpA)	**1.9**		1.9	0.24	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorooctanoic acid (PFOA)	**3.1**		1.9	0.81	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorononanoic acid (PFNA)	**1.2**	**J**	1.9	0.26	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorodecanoic acid (PFDA)	**0.81**	**J**	1.9	0.30	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		1.9	0.28	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.85		1.9	0.85	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorobutanesulfonic acid (PFBS)	**2.6**		1.9	0.19	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.44		1.9	0.44	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorohexanesulfonic acid (PFHxS)	**1.2**	**J B**	1.9	0.16	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorooctanesulfonic acid (PFOS)	**6.4**		1.9	0.52	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorooctanesulfonamide (FOSA)	**0.98**	**J**	1.9	0.33	ng/L		08/26/20 18:43	08/27/20 19:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		19	3.0	ng/L		08/26/20 18:43	08/27/20 19:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		08/26/20 18:43	08/27/20 19:40	1
4:2 FTS	<5.0		19	5.0	ng/L		08/26/20 18:43	08/27/20 19:40	1
6:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 19:40	1
8:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 19:40	1
10:2 FTS	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 19:40	1
NEtFOSA	<0.83		1.9	0.83	ng/L		08/26/20 18:43	08/27/20 19:40	1
NMeFOSA	<0.41		1.9	0.41	ng/L		08/26/20 18:43	08/27/20 19:40	1
Perfluorododecanesulfonic acid (PFDoS)	<0.43		1.9	0.43	ng/L		08/26/20 18:43	08/27/20 19:40	1
NMeFOSE	<1.3		3.8	1.3	ng/L		08/26/20 18:43	08/27/20 19:40	1
NEtFOSE	<0.81		1.9	0.81	ng/L		08/26/20 18:43	08/27/20 19:40	1
ADONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 19:40	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/26/20 18:43	08/27/20 19:40	1
HFPO-DA (GenX)	<1.4		3.8	1.4	ng/L		08/26/20 18:43	08/27/20 19:40	1
F-53B Minor	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/27/20 19:40	1
NaDONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 19:40	1
DONA	<0.17		1.9	0.17	ng/L		08/26/20 18:43	08/27/20 19:40	1
Ammonium Perfluorooctanoate (APFO)	**3.3**		2.0	0.84	ng/L		08/26/20 18:43	08/27/20 19:40	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: WCB Sump
Date Collected: 08/20/20 13:25
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-12
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C5 PFPeA	105		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C2 PFHxA	111		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C4 PFHpA	106		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C4 PFOA	101		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C5 PFNA	110		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C2 PFDA	108		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C2 PFHxDA	104		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C2 PFUnA	110		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C2 PFDoA	106		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C2 PFTeDA	101		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C3 PFBS	103		25 - 150	08/26/20 18:43	08/27/20 19:40	1
18O2 PFHxS	108		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C4 PFOS	103		25 - 150	08/26/20 18:43	08/27/20 19:40	1
13C8 FOSA	107		25 - 150	08/26/20 18:43	08/27/20 19:40	1
d3-NMeFOSAA	107		25 - 150	08/26/20 18:43	08/27/20 19:40	1
d5-NEtFOSAA	113		25 - 150	08/26/20 18:43	08/27/20 19:40	1
M2-6:2 FTS	125		25 - 150	08/26/20 18:43	08/27/20 19:40	1
M2-8:2 FTS	122		25 - 150	08/26/20 18:43	08/27/20 19:40	1
M2-4:2 FTS	126		25 - 150	08/26/20 18:43	08/27/20 19:40	1
d-N-MeFOSA-M	74		20 - 150	08/26/20 18:43	08/27/20 19:40	1
d-N-EtFOSA-M	52		20 - 150	08/26/20 18:43	08/27/20 19:40	1
d7-N-MeFOSE-M	49		10 - 120	08/26/20 18:43	08/27/20 19:40	1
d9-N-EtFOSE-M	44		10 - 120	08/26/20 18:43	08/27/20 19:40	1
13C3 HFPO-DA	98		25 - 150	08/26/20 18:43	08/27/20 19:40	1

Client Sample ID: WCB Sump FD

Date Collected: 08/20/20 13:25
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-13

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**8.8**		1.9	0.34	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluoropentanoic acid (PFPeA)	**8.2**		1.9	0.47	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorohexanoic acid (PFHxA)	**3.9**		1.9	0.56	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluoroheptanoic acid (PFHpA)	**1.9**		1.9	0.24	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorooctanoic acid (PFOA)	**3.2**		1.9	0.82	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorononanoic acid (PFNA)	**1.2**	**J**	1.9	0.26	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorodecanoic acid (PFDA)	**0.75**	**J**	1.9	0.30	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorotridecanoic acid (PFTriA)	<1.3		1.9	1.3	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorotetradecanoic acid (PFTeA)	<0.28		1.9	0.28	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.86		1.9	0.86	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorobutanesulfonic acid (PFBS)	**2.4**		1.9	0.19	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.45		1.9	0.45	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorohexanesulfonic acid (PFHxS)	**1.3**	**J B**	1.9	0.16	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorooctanesulfonic acid (PFOS)	**6.3**		1.9	0.52	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorooctanesulfonamide (FOSA)	**1.2**	**J**	1.9	0.34	ng/L		08/26/20 18:43	08/27/20 19:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.0		19	3.0	ng/L		08/26/20 18:43	08/27/20 19:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		08/26/20 18:43	08/27/20 19:49	1
4:2 FTS	<5.0		19	5.0	ng/L		08/26/20 18:43	08/27/20 19:49	1
6:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 19:49	1
8:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 19:49	1
10:2 FTS	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 19:49	1
NEtFOSA	<0.84		1.9	0.84	ng/L		08/26/20 18:43	08/27/20 19:49	1
NMeFOSA	<0.42		1.9	0.42	ng/L		08/26/20 18:43	08/27/20 19:49	1
Perfluorododecanesulfonic acid (PFDoS)	<0.44		1.9	0.44	ng/L		08/26/20 18:43	08/27/20 19:49	1
NMeFOSE	<1.4		3.9	1.4	ng/L		08/26/20 18:43	08/27/20 19:49	1
NEtFOSE	<0.82		1.9	0.82	ng/L		08/26/20 18:43	08/27/20 19:49	1
ADONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 19:49	1
F-53B Major	<0.23		1.9	0.23	ng/L		08/26/20 18:43	08/27/20 19:49	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		08/26/20 18:43	08/27/20 19:49	1
F-53B Minor	<0.31		1.9	0.31	ng/L		08/26/20 18:43	08/27/20 19:49	1
NaDONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 19:49	1
DONA	<0.17		1.9	0.17	ng/L		08/26/20 18:43	08/27/20 19:49	1
Ammonium Perfluorooctanoate (APFO)	**3.3**		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 19:49	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: WCB Sump FD
Date Collected: 08/20/20 13:25
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-13
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C5 PFPeA	102		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C2 PFHxA	109		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C4 PFHpA	107		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C4 PFOA	102		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C5 PFNA	111		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C2 PFDA	110		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C2 PFHxDA	106		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C2 PFUnA	107		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C2 PFDoA	110		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C2 PFTeDA	101		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C3 PFBS	104		25 - 150	08/26/20 18:43	08/27/20 19:49	1
18O2 PFHxS	102		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C4 PFOS	104		25 - 150	08/26/20 18:43	08/27/20 19:49	1
13C8 FOSA	106		25 - 150	08/26/20 18:43	08/27/20 19:49	1
d3-NMeFOSAA	106		25 - 150	08/26/20 18:43	08/27/20 19:49	1
d5-NEtFOSAA	106		25 - 150	08/26/20 18:43	08/27/20 19:49	1
M2-6:2 FTS	126		25 - 150	08/26/20 18:43	08/27/20 19:49	1
M2-8:2 FTS	124		25 - 150	08/26/20 18:43	08/27/20 19:49	1
M2-4:2 FTS	122		25 - 150	08/26/20 18:43	08/27/20 19:49	1
d-N-MeFOSA-M	75		20 - 150	08/26/20 18:43	08/27/20 19:49	1
d-N-EtFOSA-M	51		20 - 150	08/26/20 18:43	08/27/20 19:49	1
d7-N-MeFOSE-M	46		10 - 120	08/26/20 18:43	08/27/20 19:49	1
d9-N-EtFOSE-M	38		10 - 120	08/26/20 18:43	08/27/20 19:49	1
13C3 HFPO-DA	100		25 - 150	08/26/20 18:43	08/27/20 19:49	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: BNT-8
Date Collected: 08/20/20 14:05
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-14
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.3**		1.9	0.33	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluoropentanoic acid (PFPeA)	**3.4**		1.9	0.46	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorohexanoic acid (PFHxA)	**3.7**		1.9	0.54	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluoroheptanoic acid (PFHpA)	**1.8**	**J**	1.9	0.23	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorooctanoic acid (PFOA)	**3.0**		1.9	0.79	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorononanoic acid (PFNA)	<0.25		1.9	0.25	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorodecanoic acid (PFDA)	<0.29		1.9	0.29	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorododecanoic acid (PFDoA)	<0.51		1.9	0.51	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.9	1.2	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorotetradecanoic acid (PFTeA)	<0.27		1.9	0.27	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.83		1.9	0.83	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorobutanesulfonic acid (PFBS)	**2.3**		1.9	0.19	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.43		1.9	0.43	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluoropentanesulfonic acid (PFPeS)	**1.1**	**J**	1.9	0.28	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorohexanesulfonic acid (PFHxS)	**8.6**	**B**	1.9	0.16	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorooctanesulfonic acid (PFOS)	**13**		1.9	0.50	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorooctanesulfonamide (FOSA)	**0.61**	**J**	1.9	0.33	ng/L		08/26/20 18:43	08/27/20 19:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.9		19	2.9	ng/L		08/26/20 18:43	08/27/20 19:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		08/26/20 18:43	08/27/20 19:58	1
4:2 FTS	<4.8		19	4.8	ng/L		08/26/20 18:43	08/27/20 19:58	1
6:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 19:58	1
8:2 FTS	<1.9		19	1.9	ng/L		08/26/20 18:43	08/27/20 19:58	1
10:2 FTS	<0.18		1.9	0.18	ng/L		08/26/20 18:43	08/27/20 19:58	1
NEtFOSA	<0.81		1.9	0.81	ng/L		08/26/20 18:43	08/27/20 19:58	1
NMeFOSA	<0.40		1.9	0.40	ng/L		08/26/20 18:43	08/27/20 19:58	1
Perfluorododecanesulfonic acid (PFDoS)	<0.42		1.9	0.42	ng/L		08/26/20 18:43	08/27/20 19:58	1
NMeFOSE	<1.3		3.7	1.3	ng/L		08/26/20 18:43	08/27/20 19:58	1
NEtFOSE	<0.79		1.9	0.79	ng/L		08/26/20 18:43	08/27/20 19:58	1
ADONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 19:58	1
F-53B Major	<0.22		1.9	0.22	ng/L		08/26/20 18:43	08/27/20 19:58	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		08/26/20 18:43	08/27/20 19:58	1
F-53B Minor	<0.30		1.9	0.30	ng/L		08/26/20 18:43	08/27/20 19:58	1
NaDONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 19:58	1
DONA	<0.17		1.9	0.17	ng/L		08/26/20 18:43	08/27/20 19:58	1
Ammonium Perfluorooctanoate (APFO)	**3.1**		2.0	0.82	ng/L		08/26/20 18:43	08/27/20 19:58	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: BNT-8
Date Collected: 08/20/20 14:05
Date Received: 08/21/20 09:50

Lab Sample ID: 320-63888-14
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	58		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C5 PFPeA	97		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C2 PFHxA	106		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C4 PFHpA	100		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C4 PFOA	103		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C5 PFNA	109		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C2 PFDA	105		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C2 PFHxDA	52		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C2 PFUnA	103		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C2 PFDoA	98		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C2 PFTeDA	66		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C3 PFBS	98		25 - 150	08/26/20 18:43	08/27/20 19:58	1
18O2 PFHxS	102		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C4 PFOS	101		25 - 150	08/26/20 18:43	08/27/20 19:58	1
13C8 FOSA	105		25 - 150	08/26/20 18:43	08/27/20 19:58	1
d3-NMeFOSAA	101		25 - 150	08/26/20 18:43	08/27/20 19:58	1
d5-NEtFOSAA	100		25 - 150	08/26/20 18:43	08/27/20 19:58	1
M2-6:2 FTS	138		25 - 150	08/26/20 18:43	08/27/20 19:58	1
M2-8:2 FTS	130		25 - 150	08/26/20 18:43	08/27/20 19:58	1
M2-4:2 FTS	134		25 - 150	08/26/20 18:43	08/27/20 19:58	1
d-N-MeFOSA-M	90		20 - 150	08/26/20 18:43	08/27/20 19:58	1
d-N-EtFOSA-M	67		20 - 150	08/26/20 18:43	08/27/20 19:58	1
d7-N-MeFOSE-M	51		10 - 120	08/26/20 18:43	08/27/20 19:58	1
d9-N-EtFOSE-M	43		10 - 120	08/26/20 18:43	08/27/20 19:58	1
13C3 HFPO-DA	97		25 - 150	08/26/20 18:43	08/27/20 19:58	1

Isotope Dilution Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

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)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFHxDA (25-150)
320-63888-1	River Outlet	64	99	108	107	103	113	106	57
320-63888-2	Blount St. Outlet	60	97	108	104	99	112	108	49
320-63888-3	Blount St. Outlet FD	65	100	109	105	101	116	105	48
320-63888-4	Path Outlet	58	96	106	104	102	113	107	54
320-63888-5	BNT-3	73	95	107	104	101	111	108	52
320-63888-6	BNT-4	57	89	102	105	104	117	106	47
320-63888-7	LVN-6	61	85	100	104	103	115	111	73
320-63888-8	MW-1	60			107	105	128	118	102
320-63888-8 - DL	MW-1		110	108					
320-63888-9	Storm Ceptor	96	108	108	105	104	111	109	103
320-63888-10	FB 20200820	102	108	105	106	104	114	117	117
320-63888-11	EB 20200820	89	109	110	107	106	115	110	116
320-63888-12	WCB Sump	88	105	111	106	101	110	108	104
320-63888-13	WCB Sump FD	88	102	109	107	102	111	110	106
320-63888-14	BNT-8	58	97	106	100	103	109	105	52
LCS 320-407004/2-A	Lab Control Sample	105	110	110	105	106	119	110	111
LCSD 320-407004/3-A	Lab Control Sample Dup	107	111	108	106	108	116	114	109
MB 320-407004/1-A	Method Blank	100	105	102	101	101	112	103	108

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
320-63888-1	River Outlet	102	98	66	100	103	103	108	107
320-63888-2	Blount St. Outlet	99	89	58	100	103	105	106	102
320-63888-3	Blount St. Outlet FD	103	88	52	101	106	101	106	103
320-63888-4	Path Outlet	104	91	61	95	101	99	105	101
320-63888-5	BNT-3	114	109	65	98	102	103	110	129
320-63888-6	BNT-4	104	94	53	93	103	99	103	106
320-63888-7	LVN-6	114	116	87	94	106	103	109	116
320-63888-8	MW-1	113	119	92	94	110	114	117	120
320-63888-8 - DL	MW-1								
320-63888-9	Storm Ceptor	110	107	93	105	111	104	111	115
320-63888-10	FB 20200820	116	128	104	109	111	111	107	110
320-63888-11	EB 20200820	113	113	111	109	109	109	107	113
320-63888-12	WCB Sump	110	106	101	103	108	103	107	107
320-63888-13	WCB Sump FD	107	110	101	104	102	104	106	106
320-63888-14	BNT-8	103	98	66	98	102	101	105	101
LCS 320-407004/2-A	Lab Control Sample	113	124	101	106	107	110	106	114
LCSD 320-407004/3-A	Lab Control Sample Dup	113	114	101	110	112	110	108	119
MB 320-407004/1-A	Method Blank	104	105	87	106	107	105	101	105

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)
320-63888-1	River Outlet	108	137	131	141	89	66	42	40
320-63888-2	Blount St. Outlet	102	142	131	141	79	59	44	40
320-63888-3	Blount St. Outlet FD	105	137	132	142	83	59	51	42
320-63888-4	Path Outlet	104	137	135	141	79	57	43	37
320-63888-5	BNT-3	133	155 *5	187 *5	155 *5	87	73	73	63
320-63888-6	BNT-4	106	149	143	142	89	71	60	51
320-63888-7	LVN-6	141	174 *5	196 *5	146	85	70	63	60

Isotope Dilution Summary

Client: AECOM
Job ID: 320-63888-1
Project/Site: ATC - Madison 60611431

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	d5NEFOS (25-150)	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)
320-63888-8	MW-1	132		207 *5	130	80	65	66	55
320-63888-8 - DL	MW-1		124						
320-63888-9	Storm Ceptor	118	134	124	119	80	71	72	67
320-63888-10	FB 20200820	114	119	119	113	90	57	36	29
320-63888-11	EB 20200820	114	113	117	112	93	61	39	31
320-63888-12	WCB Sump	113	125	122	126	74	52	49	44
320-63888-13	WCB Sump FD	106	126	124	122	75	51	46	38
320-63888-14	BNT-8	100	138	130	134	90	67	51	43
LCS 320-407004/2-A	Lab Control Sample	116	121	113	116	85	49	22	16
LCSD 320-407004/3-A	Lab Control Sample Dup	122	121	123	112	97	71	41	26
MB 320-407004/1-A	Method Blank	112	115	114	107	90	66	32	23

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
320-63888-1	River Outlet	98
320-63888-2	Blount St. Outlet	97
320-63888-3	Blount St. Outlet FD	100
320-63888-4	Path Outlet	97
320-63888-5	BNT-3	96
320-63888-6	BNT-4	96
320-63888-7	LVN-6	98
320-63888-8	MW-1	102
320-63888-8 - DL	MW-1	
320-63888-9	Storm Ceptor	102
320-63888-10	FB 20200820	99
320-63888-11	EB 20200820	103
320-63888-12	WCB Sump	98
320-63888-13	WCB Sump FD	100
320-63888-14	BNT-8	97
LCS 320-407004/2-A	Lab Control Sample	101
LCSD 320-407004/3-A	Lab Control Sample Dup	104
MB 320-407004/1-A	Method Blank	98

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFHxDA = 13C2 PFHxDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA

Isotope Dilution Summary

Client: AECOM
Job ID: 320-63888-1
Project/Site: ATC - Madison 60611431

d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-407004/1-A
Matrix: Water
Analysis Batch: 407314

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407004

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.35		2.0	0.35	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorotetradecanoic acid (PFTeA)	<0.29		2.0	0.29	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.46		2.0	0.46	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorohexanesulfonic acid (PFHxS)	0.294	J	2.0	0.17	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorononanesulfonic acid (PFNS)	<0.16		2.0	0.16	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorooctanesulfonamide (FOSA)	<0.35		2.0	0.35	ng/L		08/26/20 18:43	08/27/20 17:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.1		20	3.1	ng/L		08/26/20 18:43	08/27/20 17:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		08/26/20 18:43	08/27/20 17:23	1
4:2 FTS	<5.2		20	5.2	ng/L		08/26/20 18:43	08/27/20 17:23	1
6:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 17:23	1
8:2 FTS	<2.0		20	2.0	ng/L		08/26/20 18:43	08/27/20 17:23	1
10:2 FTS	<0.19		2.0	0.19	ng/L		08/26/20 18:43	08/27/20 17:23	1
NEtFOSA	<0.87		2.0	0.87	ng/L		08/26/20 18:43	08/27/20 17:23	1
NMeFOSA	<0.43		2.0	0.43	ng/L		08/26/20 18:43	08/27/20 17:23	1
Perfluorododecanesulfonic acid (PFDoS)	<0.45		2.0	0.45	ng/L		08/26/20 18:43	08/27/20 17:23	1
NMeFOSE	<1.4		4.0	1.4	ng/L		08/26/20 18:43	08/27/20 17:23	1
NEtFOSE	<0.85		2.0	0.85	ng/L		08/26/20 18:43	08/27/20 17:23	1
ADONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 17:23	1
F-53B Major	<0.24		2.0	0.24	ng/L		08/26/20 18:43	08/27/20 17:23	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		08/26/20 18:43	08/27/20 17:23	1
F-53B Minor	<0.32		2.0	0.32	ng/L		08/26/20 18:43	08/27/20 17:23	1
NaDONA	<0.19		2.1	0.19	ng/L		08/26/20 18:43	08/27/20 17:23	1
DONA	<0.18		2.0	0.18	ng/L		08/26/20 18:43	08/27/20 17:23	1
Ammonium Perfluorooctanoate (APFO)	<0.88		2.1	0.88	ng/L		08/26/20 18:43	08/27/20 17:23	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*100*		*25 - 150*	*08/26/20 18:43*	*08/27/20 17:23*	*1*

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

Lab Sample ID: MB 320-407004/1-A
Matrix: Water
Analysis Batch: 407314

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407004

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	105		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C2 PFHxA	102		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C4 PFHpA	101		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C4 PFOA	101		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C5 PFNA	112		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C2 PFDA	103		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C2 PFHxDA	108		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C2 PFUnA	104		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C2 PFDoA	105		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C2 PFTeDA	87		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C3 PFBS	106		25 - 150	08/26/20 18:43	08/27/20 17:23	1
18O2 PFHxS	107		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C4 PFOS	105		25 - 150	08/26/20 18:43	08/27/20 17:23	1
13C8 FOSA	101		25 - 150	08/26/20 18:43	08/27/20 17:23	1
d3-NMeFOSAA	105		25 - 150	08/26/20 18:43	08/27/20 17:23	1
d5-NEtFOSAA	112		25 - 150	08/26/20 18:43	08/27/20 17:23	1
M2-6:2 FTS	115		25 - 150	08/26/20 18:43	08/27/20 17:23	1
M2-8:2 FTS	114		25 - 150	08/26/20 18:43	08/27/20 17:23	1
M2-4:2 FTS	107		25 - 150	08/26/20 18:43	08/27/20 17:23	1
d-N-MeFOSA-M	90		20 - 150	08/26/20 18:43	08/27/20 17:23	1
d-N-EtFOSA-M	66		20 - 150	08/26/20 18:43	08/27/20 17:23	1
d7-N-MeFOSE-M	32		10 - 120	08/26/20 18:43	08/27/20 17:23	1
d9-N-EtFOSE-M	23		10 - 120	08/26/20 18:43	08/27/20 17:23	1
13C3 HFPO-DA	98		25 - 150	08/26/20 18:43	08/27/20 17:23	1

Lab Sample ID: LCS 320-407004/2-A
Matrix: Water
Analysis Batch: 407314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	39.6		ng/L		99	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	35.4		ng/L		88	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	37.7		ng/L		94	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	39.2		ng/L		98	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	38.2		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	40.0	35.4		ng/L		88	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	39.1		ng/L		98	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	38.1		ng/L		95	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	34.1		ng/L		85	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	30.7		ng/L		77	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	39.7		ng/L		99	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	40.9		ng/L		102	76 - 136
Perfluorobutanesulfonic acid (PFBS)	35.4	33.7		ng/L		95	67 - 127
Perfluoro-n-octadecanoic acid (PFODA)	40.0	38.0		ng/L		95	58 - 145

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

Lab Sample ID: LCS 320-407004/2-A
Matrix: Water
Analysis Batch: 407314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanesulfonic acid (PFPeS)	37.5	36.8		ng/L		98	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	32.8		ng/L		90	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	38.1		ng/L		100	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	35.0		ng/L		94	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	37.3		ng/L		97	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	34.4		ng/L		89	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	40.6		ng/L		102	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	36.0		ng/L		90	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.3		ng/L		91	76 - 136
4:2 FTS	37.4	33.9		ng/L		91	79 - 139
6:2 FTS	37.9	34.3		ng/L		90	59 - 175
8:2 FTS	38.3	36.3		ng/L		95	75 - 135
10:2 FTS	38.6	38.6		ng/L		100	64 - 142
NMeFOSA	40.0	38.8		ng/L		97	67 - 154
Perfluorododecanesulfonic acid (PFDoS)	38.7	39.2		ng/L		101	67 - 127
NMeFOSE	40.0	38.0		ng/L		95	70 - 130
NEtFOSE	40.0	39.4		ng/L		98	71 - 131
ADONA	39.5	38.3		ng/L		97	79 - 139
F-53B Major	37.3	34.4		ng/L		92	75 - 135
HFPO-DA (GenX)	40.0	40.1		ng/L		100	51 - 173
F-53B Minor	37.7	33.7		ng/L		90	54 - 114
NaDONA	40.0	38.8		ng/L		97	79 - 139
DONA	37.7	36.6		ng/L		97	79 - 139
Ammonium Perfluorooctanoate (APFO)	41.6	39.7		ng/L		95	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*105*		*25 - 150*
13C5 PFPeA	*110*		*25 - 150*
13C2 PFHxA	*110*		*25 - 150*
13C4 PFHpA	*105*		*25 - 150*
13C4 PFOA	*106*		*25 - 150*
13C5 PFNA	*119*		*25 - 150*
13C2 PFDA	*110*		*25 - 150*
13C2 PFHxDA	*111*		*25 - 150*
13C2 PFUnA	*113*		*25 - 150*
13C2 PFDoA	*124*		*25 - 150*
13C2 PFTeDA	*101*		*25 - 150*
13C3 PFBS	*106*		*25 - 150*
18O2 PFHxS	*107*		*25 - 150*
13C4 PFOS	*110*		*25 - 150*

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

Lab Sample ID: LCS 320-407004/2-A
Matrix: Water
Analysis Batch: 407314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407004

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	106		25 - 150
d3-NMeFOSAA	114		25 - 150
d5-NEtFOSAA	116		25 - 150
M2-6:2 FTS	121		25 - 150
M2-8:2 FTS	113		25 - 150
M2-4:2 FTS	116		25 - 150
d-N-MeFOSA-M	85		20 - 150
d-N-EtFOSA-M	49		20 - 150
d7-N-MeFOSE-M	22		10 - 120
d9-N-EtFOSE-M	16		10 - 120
13C3 HFPO-DA	101		25 - 150

Lab Sample ID: LCSD 320-407004/3-A
Matrix: Water
Analysis Batch: 407314

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 407004

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	38.8		ng/L		97	76 - 136	2	30
Perfluoropentanoic acid (PFPeA)			40.0	36.2		ng/L		90	71 - 131	2	30
Perfluorohexanoic acid (PFHxA)			40.0	38.5		ng/L		96	73 - 133	2	30
Perfluoroheptanoic acid (PFHpA)			40.0	40.0		ng/L		100	72 - 132	2	30
Perfluorooctanoic acid (PFOA)			40.0	36.8		ng/L		92	70 - 130	4	30
Perfluorononanoic acid (PFNA)			40.0	37.7		ng/L		94	75 - 135	6	30
Perfluorodecanoic acid (PFDA)			40.0	37.1		ng/L		93	76 - 136	5	30
Perfluoroundecanoic acid (PFUnA)			40.0	37.9		ng/L		95	68 - 128	1	30
Perfluorododecanoic acid (PFDoA)			40.0	36.5		ng/L		91	71 - 131	7	30
Perfluorotridecanoic acid (PFTriA)			40.0	31.6		ng/L		79	71 - 131	3	30
Perfluorotetradecanoic acid (PFTeA)			40.0	42.9		ng/L		107	70 - 130	8	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			40.0	41.7		ng/L		104	76 - 136	2	30
Perfluorobutanesulfonic acid (PFBS)			35.4	32.6		ng/L		92	67 - 127	3	30
Perfluoro-n-octadecanoic acid (PFODA)			40.0	38.3		ng/L		96	58 - 145	1	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	37.4		ng/L		100	66 - 126	2	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	32.5		ng/L		89	59 - 119	1	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	38.0		ng/L		100	76 - 136	0	30
Perfluorooctanesulfonic acid (PFOS)			37.1	36.9		ng/L		99	70 - 130	5	30
Perfluorononanesulfonic acid (PFNS)			38.4	38.0		ng/L		99	75 - 135	2	30
Perfluorodecanesulfonic acid (PFDS)			38.6	35.8		ng/L		93	71 - 131	4	30
Perfluorooctanesulfonamide (FOSA)			40.0	39.9		ng/L		100	73 - 133	2	30

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

Lab Sample ID: LCSD 320-407004/3-A
Matrix: Water
Analysis Batch: 407314

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 407004

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	36.7		ng/L		92	76 - 136	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	35.7		ng/L		89	76 - 136	2	30
4:2 FTS			37.4	37.6		ng/L		101	79 - 139	10	30
6:2 FTS			37.9	36.4		ng/L		96	59 - 175	6	30
8:2 FTS			38.3	35.1		ng/L		92	75 - 135	3	30
10:2 FTS			38.6	38.6		ng/L		100	64 - 142	0	30
NMeFOSA			40.0	38.0		ng/L		95	67 - 154	2	30
Perfluorododecanesulfonic acid (PFDoS)			38.7	40.0		ng/L		103	67 - 127	2	30
NMeFOSE			40.0	35.0		ng/L		87	70 - 130	8	30
NEtFOSE			40.0	37.7		ng/L		94	71 - 131	4	30
ADONA			39.5	38.8		ng/L		98	79 - 139	1	30
F-53B Major			37.3	35.7		ng/L		96	75 - 135	4	30
HFPO-DA (GenX)			40.0	39.7		ng/L		99	51 - 173	1	30
F-53B Minor			37.7	34.1		ng/L		91	54 - 114	1	30
NaDONA			40.0	39.2		ng/L		98	79 - 139	1	30
DONA			37.7	37.0		ng/L		98	79 - 139	1	30
Ammonium Perfluorooctanoate (APFO)			41.6	38.3		ng/L		92	70 - 130	4	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*107*		*25 - 150*
13C5 PFPeA	*111*		*25 - 150*
13C2 PFHxA	*108*		*25 - 150*
13C4 PFHpA	*106*		*25 - 150*
13C4 PFOA	*108*		*25 - 150*
13C5 PFNA	*116*		*25 - 150*
13C2 PFDA	*114*		*25 - 150*
13C2 PFHxDA	*109*		*25 - 150*
13C2 PFUnA	*113*		*25 - 150*
13C2 PFDoA	*114*		*25 - 150*
13C2 PFTeDA	*101*		*25 - 150*
13C3 PFBS	*110*		*25 - 150*
18O2 PFHxS	*112*		*25 - 150*
13C4 PFOS	*110*		*25 - 150*
13C8 FOSA	*108*		*25 - 150*
d3-NMeFOSAA	*119*		*25 - 150*
d5-NEtFOSAA	*122*		*25 - 150*
M2-6:2 FTS	*121*		*25 - 150*
M2-8:2 FTS	*123*		*25 - 150*
M2-4:2 FTS	*112*		*25 - 150*
d-N-MeFOSA-M	*97*		*20 - 150*
d-N-EtFOSA-M	*71*		*20 - 150*
d7-N-MeFOSE-M	*41*		*10 - 120*
d9-N-EtFOSE-M	*26*		*10 - 120*
13C3 HFPO-DA	*104*		*25 - 150*

LCMS

Prep Batch: 407004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-63888-1	River Outlet	Total/NA	Water	3535	
320-63888-2	Blount St. Outlet	Total/NA	Water	3535	
320-63888-3	Blount St. Outlet FD	Total/NA	Water	3535	
320-63888-4	Path Outlet	Total/NA	Water	3535	
320-63888-5	BNT-3	Total/NA	Water	3535	
320-63888-6	BNT-4	Total/NA	Water	3535	
320-63888-7	LVN-6	Total/NA	Water	3535	
320-63888-8	MW-1	Total/NA	Water	3535	
320-63888-8 - DL	MW-1	Total/NA	Water	3535	
320-63888-9	Storm Ceptor	Total/NA	Water	3535	
320-63888-10	FB 20200820	Total/NA	Water	3535	
320-63888-11	EB 20200820	Total/NA	Water	3535	
320-63888-12	WCB Sump	Total/NA	Water	3535	
320-63888-13	WCB Sump FD	Total/NA	Water	3535	
320-63888-14	BNT-8	Total/NA	Water	3535	
MB 320-407004/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-407004/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-407004/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 407314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-63888-1	River Outlet	Total/NA	Water	537 (modified)	407004
320-63888-2	Blount St. Outlet	Total/NA	Water	537 (modified)	407004
320-63888-3	Blount St. Outlet FD	Total/NA	Water	537 (modified)	407004
320-63888-4	Path Outlet	Total/NA	Water	537 (modified)	407004
320-63888-5	BNT-3	Total/NA	Water	537 (modified)	407004
320-63888-6	BNT-4	Total/NA	Water	537 (modified)	407004
320-63888-7	LVN-6	Total/NA	Water	537 (modified)	407004
320-63888-8	MW-1	Total/NA	Water	537 (modified)	407004
320-63888-9	Storm Ceptor	Total/NA	Water	537 (modified)	407004
320-63888-11	EB 20200820	Total/NA	Water	537 (modified)	407004
320-63888-12	WCB Sump	Total/NA	Water	537 (modified)	407004
320-63888-13	WCB Sump FD	Total/NA	Water	537 (modified)	407004
320-63888-14	BNT-8	Total/NA	Water	537 (modified)	407004
MB 320-407004/1-A	Method Blank	Total/NA	Water	537 (modified)	407004
LCS 320-407004/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	407004
LCSD 320-407004/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	407004

Analysis Batch: 407584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-63888-8 - DL	MW-1	Total/NA	Water	537 (modified)	407004
320-63888-10	FB 20200820	Total/NA	Water	537 (modified)	407004

Lab Chronicle

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Client Sample ID: River Outlet
Lab Sample ID: 320-63888-1
Date Collected: 08/20/20 09:00
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			255.5 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 17:50	A1C	TAL SAC

Client Sample ID: Blount St. Outlet
Lab Sample ID: 320-63888-2
Date Collected: 08/20/20 09:20
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			259.5 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 17:59	A1C	TAL SAC

Client Sample ID: Blount St. Outlet FD
Lab Sample ID: 320-63888-3
Date Collected: 08/20/20 09:20
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250.2 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 18:08	A1C	TAL SAC

Client Sample ID: Path Outlet
Lab Sample ID: 320-63888-4
Date Collected: 08/20/20 09:40
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			255.1 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 18:17	A1C	TAL SAC

Client Sample ID: BNT-3
Lab Sample ID: 320-63888-5
Date Collected: 08/20/20 09:50
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			260.7 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 18:27	A1C	TAL SAC

Client Sample ID: BNT-4
Lab Sample ID: 320-63888-6
Date Collected: 08/20/20 10:10
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			264.9 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 18:36	A1C	TAL SAC

Client Sample ID: LVN-6
Lab Sample ID: 320-63888-7
Date Collected: 08/20/20 10:25
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			265.8 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 18:45	A1C	TAL SAC

Client Sample ID: MW-1
Lab Sample ID: 320-63888-8
Date Collected: 08/20/20 11:35
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			256.4 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 19:12	A1C	TAL SAC
Total/NA	Prep	3535	DL		256.4 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)	DL	20			407584	08/28/20 12:43	MM	TAL SAC

Client Sample ID: Storm Ceptor
Lab Sample ID: 320-63888-9
Date Collected: 08/20/20 12:00
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			244.5 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		10			407314	08/27/20 20:16	A1C	TAL SAC

Client Sample ID: FB 20200820
Lab Sample ID: 320-63888-10
Date Collected: 08/20/20 12:40
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			260.3 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407584	08/28/20 12:34	MM	TAL SAC

Client Sample ID: EB 20200820
Lab Sample ID: 320-63888-11
Date Collected: 08/20/20 12:50
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			254.1 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 19:30	A1C	TAL SAC

Client Sample ID: WCB Sump
Lab Sample ID: 320-63888-12
Date Collected: 08/20/20 13:25
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			261.2 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 19:40	A1C	TAL SAC

Lab Chronicle

Client: AECOM
Job ID: 320-63888-1
Project/Site: ATC - Madison 60611431

Client Sample ID: WCB Sump FD
Lab Sample ID: 320-63888-13
Date Collected: 08/20/20 13:25
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			258.3 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 19:49	A1C	TAL SAC

Client Sample ID: BNT-8
Lab Sample ID: 320-63888-14
Date Collected: 08/20/20 14:05
Matrix: Water
Date Received: 08/21/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			269.1 mL	10.00 mL	407004	08/26/20 18:43	JER	TAL SAC
Total/NA	Analysis	537 (modified)		1			407314	08/27/20 19:58	A1C	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 320-63888-1
Project/Site: ATC - Madison 60611431

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-21
Arkansas DEQ	State	88-0691	06-17-21
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-21
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-21
Maine	State	CA00004	04-14-22
Michigan	State	9947	08-03-23
Nevada	State	CA000442021-1	07-31-21
New Hampshire	NELAP	2997	04-18-21
New Jersey	NELAP	CA005	06-30-21
New York	NELAP	11666	04-01-21
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-21
Texas	NELAP	T104704399-19-13	06-01-21
US Fish & Wildlife	US Federal Programs	58448	07-31-21
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-21
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-21
West Virginia (DW)	State	9930C	12-31-20
Wisconsin	State	998204680	08-31-21
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
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 SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-63888-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-63888-1	River Outlet	Water	08/20/20 09:00	08/21/20 09:50	
320-63888-2	Blount St. Outlet	Water	08/20/20 09:20	08/21/20 09:50	
320-63888-3	Blount St. Outlet FD	Water	08/20/20 09:20	08/21/20 09:50	
320-63888-4	Path Outlet	Water	08/20/20 09:40	08/21/20 09:50	
320-63888-5	BNT-3	Water	08/20/20 09:50	08/21/20 09:50	
320-63888-6	BNT-4	Water	08/20/20 10:10	08/21/20 09:50	
320-63888-7	LVN-6	Water	08/20/20 10:25	08/21/20 09:50	
320-63888-8	MW-1	Water	08/20/20 11:35	08/21/20 09:50	
320-63888-9	Storm Ceptor	Water	08/20/20 12:00	08/21/20 09:50	
320-63888-10	FB 20200820	Water	08/20/20 12:40	08/21/20 09:50	
320-63888-11	EB 20200820	Water	08/20/20 12:50	08/21/20 09:50	
320-63888-12	WCB Sump	Water	08/20/20 13:25	08/21/20 09:50	
320-63888-13	WCB Sump FD	Water	08/20/20 13:25	08/21/20 09:50	
320-63888-14	BNT-8	Water	08/20/20 14:05	08/21/20 09:50	

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Joel Mackinney	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-84390-38320.1
Client Contact: Mr. Leo Linnemanstons, P.G.	Phone: 414420 4145202179	E-Mail: sandie.fredrick@testamericainc.com		Page: Page 1 of 2
Company: AECOM			Analysis Requested	Job #:
Address: 1350 Deming Way Suite 100	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Middleton	TAT Requested (days):			
State, Zip: WI, 53562				
Phone: 608-836-9800(Tel)	PO #: 60611431			
Email: leo.linnemanstons@aecom.com	WO #:			
Project Name: ATC - Madison 60611431	Project #: 50016386			
Site:	SSOW#:			Other:

320-63888 Chain of Custody

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 (36)	Total Number of containers	Special Instructions/Note:
		Preservation Code:					N		
River Outlet	8/20/20	0900	G	Water	N	N	X	2	
Blount St. outlet		0920		Water			X		
Blount St. outlet FD		~~0940~~ 0920		Water			X		
Path outlet		0940		Water			X		
BNT-3		0950		Water			X		
BNT-4		1010		Water			X		
LVN-6		1025		Water			X		
MW-1		1135		Water			X		
Storm Ceptor		1200		Water			X		
FB 20200820		1240		Water			X		
EB 20200820		1250		Water			X		

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	Joel Mackinney	8/20/20 1605	AECOM		8-20-20 1605	T A
2		8-20-20 1700	TA		8/21/20 950	STLSAC
3		Date/Time:	Company		Date/Time:	Company

Custody Seals Intact: ☒ Yes △ No | Custody Seal No.: 99170

Cooler Temperature(s) °C and Other Remarks: -0.3 cw 0.2

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Joel Mackimey	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-84390-38320.2
Client Contact: Mr. Leo Linnemanstons, P.G.	Phone: 4145202179	E-Mail: sandie.fredrick@testamericainc.com		Page: Page 2 of 2
Company: AECOM		Analysis Requested		Job #:
Address: 1350 Deming Way Suite 100	Due Date Requested:			Preservation Codes:
City: Middleton	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: WI, 53562	PO #: 60611431			
Phone: 608-836-9800(Tel)	WO #:			Other:
Email: leo.linnemanstons@aecom.com	Project #: 50016386			
Project Name: ATC - Madison 60611431	SSOW#:			
Site:				

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 (36)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
WCB sump	8/20/20	1325	G	Water	N	N	X	2	
WCB Sump FD	↓	1325		Water	↓	↓	X	↓	
BNT-8	↓	1405		Water	↓	↓	X	↓	
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

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		08/20/20 1605	AECOM		8-20-20 1605	TA
2		8-20-20 1700	TA		8/21/20 950	TA
3		Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
☐ Yes ☐ No	991170	-0.3 Cn 0.2

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: AECOM

Job Number: 320-63888-1

Login Number: 63888
List Number: 1
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	991170
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.	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 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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-65285-1
Client Project/Site: ATC - Madison 60611431

For:
AECOM
1350 Deming Way Suite 100
Middleton, Wisconsin 53562

Attn: Mr. Leo B Linnemanstons, P.G.

Sandie Fredrick

Authorized for release by:
10/8/2020 1:53:35 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

Table of Contents

Definitions/Glossary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*5	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.

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Case Narrative

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

Job ID: 320-65285-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-65285-1

Comments
No additional comments.

Receipt
The samples were received on 10/3/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2º C.

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): Field Blank (320-65285-2). The container labels lists the ID as Field Blank, while the COC lists Trip Blank. The sample was labeled according to the container labels per client.

LCMS
Method 537 (modified): The laboratory control sample (LCS) for preparation batch 320-418833 and analytical batch 320-419300 recovered outside control limits for the following analytes: Perfluorododecanoic acid (PFDoA). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 537 (modified): Results for samples Trans Sump (320-65285-1) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS the following sample: Trans Sump (320-65285-1). 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 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-418833. Method Code :3535 PFC Matrix: Water

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: ATC - Madison 60611431

Job ID: 320-65285-1

Client Sample ID: Trans Sump — Lab Sample ID: 320-65285-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	480		95	46	ng/L	20		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2800		38	9.4	ng/L	20		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1400		38	11	ng/L	20		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	220		38	4.8	ng/L	20		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	7.5	J	38	5.2	ng/L	20		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	19	J	38	10	ng/L	20		537 (modified)	Total/NA
6:2 FTS	4600		95	48	ng/L	20		537 (modified)	Total/NA

Client Sample ID: Field Blank — Lab Sample ID: 320-65285-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.80	J	2.0	0.53	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

Client Sample ID: Trans Sump

Date Collected: 10/02/20 09:15
Date Received: 10/03/20 09:30

Lab Sample ID: 320-65285-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**480**		95	46	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluoropentanoic acid (PFPeA)	**2800**		38	9.4	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorohexanoic acid (PFHxA)	**1400**		38	11	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluoroheptanoic acid (PFHpA)	**220**		38	4.8	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorooctanoic acid (PFOA)	<16		38	16	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorononanoic acid (PFNA)	**7.5**	**J**	38	5.2	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorodecanoic acid (PFDA)	<5.9		38	5.9	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluoroundecanoic acid (PFUnA)	<21		38	21	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorododecanoic acid (PFDoA)	<11		38	11	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorotridecanoic acid (PFTriA)	<25		38	25	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorotetradecanoic acid (PFTeA)	<14		38	14	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluoro-n-hexadecanoic acid (PFHxDA)	<17		38	17	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorobutanesulfonic acid (PFBS)	<3.8		38	3.8	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluoro-n-octadecanoic acid (PFODA)	<18		38	18	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluoropentanesulfonic acid (PFPeS)	<5.7		38	5.7	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorohexanesulfonic acid (PFHxS)	<11		38	11	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluoroheptanesulfonic Acid (PFHpS)	<3.6		38	3.6	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorooctanesulfonic acid (PFOS)	**19**	**J**	38	10	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorononanesulfonic acid (PFNS)	<7.1		38	7.1	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorodecanesulfonic acid (PFDS)	<6.1		38	6.1	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorooctanesulfonamide (FOSA)	<19		38	19	ng/L		10/05/20 12:27	10/07/20 13:00	20
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<23		95	23	ng/L		10/05/20 12:27	10/07/20 13:00	20
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<25		95	25	ng/L		10/05/20 12:27	10/07/20 13:00	20
4:2 FTS	<4.6		38	4.6	ng/L		10/05/20 12:27	10/07/20 13:00	20
6:2 FTS	**4600**		95	48	ng/L		10/05/20 12:27	10/07/20 13:00	20
8:2 FTS	<8.8		38	8.8	ng/L		10/05/20 12:27	10/07/20 13:00	20
10:2 FTS	<13		38	13	ng/L		10/05/20 12:27	10/07/20 13:00	20
NEtFOSA	<17		38	17	ng/L		10/05/20 12:27	10/07/20 13:00	20
NMeFOSA	<8.2		38	8.2	ng/L		10/05/20 12:27	10/07/20 13:00	20
Perfluorododecanesulfonic acid (PFDoS)	<19		38	19	ng/L		10/05/20 12:27	10/07/20 13:00	20
NMeFOSE	<27		76	27	ng/L		10/05/20 12:27	10/07/20 13:00	20
NEtFOSE	<16		38	16	ng/L		10/05/20 12:27	10/07/20 13:00	20
ADONA	<3.6		40	3.6	ng/L		10/05/20 12:27	10/07/20 13:00	20
F-53B Major	<4.6		38	4.6	ng/L		10/05/20 12:27	10/07/20 13:00	20
HFPO-DA (GenX)	<29		76	29	ng/L		10/05/20 12:27	10/07/20 13:00	20
F-53B Minor	<6.1		38	6.1	ng/L		10/05/20 12:27	10/07/20 13:00	20
NaDONA	<3.6		40	3.6	ng/L		10/05/20 12:27	10/07/20 13:00	20
DONA	<7.6		38	7.6	ng/L		10/05/20 12:27	10/07/20 13:00	20
Ammonium Perfluorooctanoate (APFO)	<17		40	17	ng/L		10/05/20 12:27	10/07/20 13:00	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*71*		*25 - 150*	*10/05/20 12:27*	*10/07/20 13:00*	*20*
13C5 PFPeA	*82*		*25 - 150*	*10/05/20 12:27*	*10/07/20 13:00*	*20*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

Client Sample ID: Trans Sump
Date Collected: 10/02/20 09:15
Date Received: 10/03/20 09:30

Lab Sample ID: 320-65285-1
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	88		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C4 PFHpA	93		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C4 PFOA	103		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C5 PFNA	98		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C2 PFDA	97		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C2 PFHxDA	64		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C2 PFUnA	108		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C2 PFDoA	84		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C2 PFTeDA	81		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C3 PFBS	88		25 - 150	10/05/20 12:27	10/07/20 13:00	20
18O2 PFHxS	91		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C4 PFOS	92		25 - 150	10/05/20 12:27	10/07/20 13:00	20
13C8 FOSA	84		25 - 150	10/05/20 12:27	10/07/20 13:00	20
d3-NMeFOSAA	79		25 - 150	10/05/20 12:27	10/07/20 13:00	20
d5-NEtFOSAA	91		25 - 150	10/05/20 12:27	10/07/20 13:00	20
M2-6:2 FTS	156	*5	25 - 150	10/05/20 12:27	10/07/20 13:00	20
M2-8:2 FTS	104		25 - 150	10/05/20 12:27	10/07/20 13:00	20
M2-4:2 FTS	149		25 - 150	10/05/20 12:27	10/07/20 13:00	20
d-N-MeFOSA-M	49		20 - 150	10/05/20 12:27	10/07/20 13:00	20
d-N-EtFOSA-M	48		20 - 150	10/05/20 12:27	10/07/20 13:00	20
d7-N-MeFOSE-M	59		10 - 120	10/05/20 12:27	10/07/20 13:00	20
d9-N-EtFOSE-M	53		10 - 120	10/05/20 12:27	10/07/20 13:00	20
13C3 HFPO-DA	94		25 - 150	10/05/20 12:27	10/07/20 13:00	20

Client Sample ID: Field Blank

Date Collected: 10/02/20 09:40
Date Received: 10/03/20 09:30

Lab Sample ID: 320-65285-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		4.9	2.4	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluoropentanoic acid (PFPeA)	<0.48		2.0	0.48	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorohexanoic acid (PFHxA)	<0.57		2.0	0.57	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorooctanoic acid (PFOA)	<0.84		2.0	0.84	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorododecanoic acid (PFDoA)	<0.54	*	2.0	0.54	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorotetradecanoic acid (PFTeA)	<0.72		2.0	0.72	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.88		2.0	0.88	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.93		2.0	0.93	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorohexanesulfonic acid (PFHxS)	<0.56		2.0	0.56	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorooctanesulfonic acid (PFOS)	**0.80**	**J**	2.0	0.53	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorononanesulfonic acid (PFNS)	<0.36		2.0	0.36	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorooctanesulfonamide (FOSA)	<0.97		2.0	0.97	ng/L		10/05/20 12:27	10/07/20 00:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.2		4.9	1.2	ng/L		10/05/20 12:27	10/07/20 00:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.3		4.9	1.3	ng/L		10/05/20 12:27	10/07/20 00:21	1
4:2 FTS	<0.24		2.0	0.24	ng/L		10/05/20 12:27	10/07/20 00:21	1
6:2 FTS	<2.5		4.9	2.5	ng/L		10/05/20 12:27	10/07/20 00:21	1
8:2 FTS	<0.45		2.0	0.45	ng/L		10/05/20 12:27	10/07/20 00:21	1
10:2 FTS	<0.66		2.0	0.66	ng/L		10/05/20 12:27	10/07/20 00:21	1
NEtFOSA	<0.86		2.0	0.86	ng/L		10/05/20 12:27	10/07/20 00:21	1
NMeFOSA	<0.42		2.0	0.42	ng/L		10/05/20 12:27	10/07/20 00:21	1
Perfluorododecanesulfonic acid (PFDoS)	<0.96		2.0	0.96	ng/L		10/05/20 12:27	10/07/20 00:21	1
NMeFOSE	<1.4		3.9	1.4	ng/L		10/05/20 12:27	10/07/20 00:21	1
NEtFOSE	<0.84		2.0	0.84	ng/L		10/05/20 12:27	10/07/20 00:21	1
ADONA	<0.19		2.1	0.19	ng/L		10/05/20 12:27	10/07/20 00:21	1
F-53B Major	<0.24		2.0	0.24	ng/L		10/05/20 12:27	10/07/20 00:21	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		10/05/20 12:27	10/07/20 00:21	1
F-53B Minor	<0.32		2.0	0.32	ng/L		10/05/20 12:27	10/07/20 00:21	1
NaDONA	<0.19		2.1	0.19	ng/L		10/05/20 12:27	10/07/20 00:21	1
DONA	<0.39		2.0	0.39	ng/L		10/05/20 12:27	10/07/20 00:21	1
Ammonium Perfluorooctanoate (APFO)	<0.87		2.1	0.87	ng/L		10/05/20 12:27	10/07/20 00:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*73*		*25 - 150*	*10/05/20 12:27*	*10/07/20 00:21*	*1*
13C5 PFPeA	*84*		*25 - 150*	*10/05/20 12:27*	*10/07/20 00:21*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

Client Sample ID: Field Blank
Date Collected: 10/02/20 09:40
Date Received: 10/03/20 09:30

Lab Sample ID: 320-65285-2
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	85		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C4 PFHpA	88		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C4 PFOA	90		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C5 PFNA	98		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C2 PFDA	81		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C2 PFHxDA	84		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C2 PFUnA	105		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C2 PFDoA	81		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C2 PFTeDA	85		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C3 PFBS	78		25 - 150	10/05/20 12:27	10/07/20 00:21	1
18O2 PFHxS	76		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C4 PFOS	83		25 - 150	10/05/20 12:27	10/07/20 00:21	1
13C8 FOSA	82		25 - 150	10/05/20 12:27	10/07/20 00:21	1
d3-NMeFOSAA	89		25 - 150	10/05/20 12:27	10/07/20 00:21	1
d5-NEtFOSAA	99		25 - 150	10/05/20 12:27	10/07/20 00:21	1
M2-6:2 FTS	102		25 - 150	10/05/20 12:27	10/07/20 00:21	1
M2-8:2 FTS	118		25 - 150	10/05/20 12:27	10/07/20 00:21	1
M2-4:2 FTS	100		25 - 150	10/05/20 12:27	10/07/20 00:21	1
d-N-MeFOSA-M	49		20 - 150	10/05/20 12:27	10/07/20 00:21	1
d-N-EtFOSA-M	39		20 - 150	10/05/20 12:27	10/07/20 00:21	1
d7-N-MeFOSE-M	33		10 - 120	10/05/20 12:27	10/07/20 00:21	1
d9-N-EtFOSE-M	28		10 - 120	10/05/20 12:27	10/07/20 00:21	1
13C3 HFPO-DA	83		25 - 150	10/05/20 12:27	10/07/20 00:21	1

Isotope Dilution Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

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)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFHxDA (25-150)
320-65285-1	Trans Sump	71	82	88	93	103	98	97	64
320-65285-2	Field Blank	73	84	85	88	90	98	81	84
LCS 320-418833/2-A	Lab Control Sample	77	85	88	85	89	96	83	81
LCSD 320-418833/3-A	Lab Control Sample Dup	81	87	90	88	96	97	99	90
MB 320-418833/1-A	Method Blank	77	85	88	83	84	90	90	70

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
320-65285-1	Trans Sump	108	84	81	88	91	92	84	79
320-65285-2	Field Blank	105	81	85	78	76	83	82	89
LCS 320-418833/2-A	Lab Control Sample	83	66	88	76	73	79	78	84
LCSD 320-418833/3-A	Lab Control Sample Dup	108	80	93	80	79	86	86	93
MB 320-418833/1-A	Method Blank	103	92	80	80	79	84	87	89

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)
320-65285-1	Trans Sump	91	156 *5	104	149	49	48	59	53
320-65285-2	Field Blank	99	102	118	100	49	39	33	28
LCS 320-418833/2-A	Lab Control Sample	82	91	123	89	50	31	28	17
LCSD 320-418833/3-A	Lab Control Sample Dup	97	99	112	97	54	37	26	21
MB 320-418833/1-A	Method Blank	103	108	112	98	54	37	21	16

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
320-65285-1	Trans Sump	94
320-65285-2	Field Blank	83
LCS 320-418833/2-A	Lab Control Sample	86
LCSD 320-418833/3-A	Lab Control Sample Dup	91
MB 320-418833/1-A	Method Blank	83

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFHxDA = 13C2 PFHxDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS

Isotope Dilution Summary

Client: AECOM
Job ID: 320-65285-1
Project/Site: ATC - Madison 60611431

M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-418833/1-A
Matrix: Water
Analysis Batch: 419300

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 418833

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.94		2.0	0.94	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		10/05/20 12:27	10/06/20 22:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.2		5.0	1.2	ng/L		10/05/20 12:27	10/06/20 22:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.3		5.0	1.3	ng/L		10/05/20 12:27	10/06/20 22:04	1
4:2 FTS	<0.24		2.0	0.24	ng/L		10/05/20 12:27	10/06/20 22:04	1
6:2 FTS	<2.5		5.0	2.5	ng/L		10/05/20 12:27	10/06/20 22:04	1
8:2 FTS	<0.46		2.0	0.46	ng/L		10/05/20 12:27	10/06/20 22:04	1
10:2 FTS	<0.67		2.0	0.67	ng/L		10/05/20 12:27	10/06/20 22:04	1
NEtFOSA	<0.87		2.0	0.87	ng/L		10/05/20 12:27	10/06/20 22:04	1
NMeFOSA	<0.43		2.0	0.43	ng/L		10/05/20 12:27	10/06/20 22:04	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		10/05/20 12:27	10/06/20 22:04	1
NMeFOSE	<1.4		4.0	1.4	ng/L		10/05/20 12:27	10/06/20 22:04	1
NEtFOSE	<0.85		2.0	0.85	ng/L		10/05/20 12:27	10/06/20 22:04	1
ADONA	<0.19		2.1	0.19	ng/L		10/05/20 12:27	10/06/20 22:04	1
F-53B Major	<0.24		2.0	0.24	ng/L		10/05/20 12:27	10/06/20 22:04	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		10/05/20 12:27	10/06/20 22:04	1
F-53B Minor	<0.32		2.0	0.32	ng/L		10/05/20 12:27	10/06/20 22:04	1
NaDONA	<0.19		2.1	0.19	ng/L		10/05/20 12:27	10/06/20 22:04	1
DONA	<0.40		2.0	0.40	ng/L		10/05/20 12:27	10/06/20 22:04	1
Ammonium Perfluorooctanoate (APFO)	<0.88		2.1	0.88	ng/L		10/05/20 12:27	10/06/20 22:04	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*77*		*25 - 150*	*10/05/20 12:27*	*10/06/20 22:04*	*1*

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

Lab Sample ID: MB 320-418833/1-A
Matrix: Water
Analysis Batch: 419300

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 418833

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	85		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C2 PFHxA	88		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C4 PFHpA	83		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C4 PFOA	84		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C5 PFNA	90		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C2 PFDA	90		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C2 PFHxDA	70		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C2 PFUnA	103		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C2 PFDoA	92		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C2 PFTeDA	80		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C3 PFBS	80		25 - 150	10/05/20 12:27	10/06/20 22:04	1
18O2 PFHxS	79		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C4 PFOS	84		25 - 150	10/05/20 12:27	10/06/20 22:04	1
13C8 FOSA	87		25 - 150	10/05/20 12:27	10/06/20 22:04	1
d3-NMeFOSAA	89		25 - 150	10/05/20 12:27	10/06/20 22:04	1
d5-NEtFOSAA	103		25 - 150	10/05/20 12:27	10/06/20 22:04	1
M2-6:2 FTS	108		25 - 150	10/05/20 12:27	10/06/20 22:04	1
M2-8:2 FTS	112		25 - 150	10/05/20 12:27	10/06/20 22:04	1
M2-4:2 FTS	98		25 - 150	10/05/20 12:27	10/06/20 22:04	1
d-N-MeFOSA-M	54		20 - 150	10/05/20 12:27	10/06/20 22:04	1
d-N-EtFOSA-M	37		20 - 150	10/05/20 12:27	10/06/20 22:04	1
d7-N-MeFOSE-M	21		10 - 120	10/05/20 12:27	10/06/20 22:04	1
d9-N-EtFOSE-M	16		10 - 120	10/05/20 12:27	10/06/20 22:04	1
13C3 HFPO-DA	83		25 - 150	10/05/20 12:27	10/06/20 22:04	1

Lab Sample ID: LCS 320-418833/2-A
Matrix: Water
Analysis Batch: 419300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	42.3		ng/L		106	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	35.4		ng/L		89	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	40.0		ng/L		100	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	38.4		ng/L		96	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	40.2		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	40.0	35.8		ng/L		90	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	40.4		ng/L		101	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	35.9		ng/L		90	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	56.8	*	ng/L		142	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	48.8		ng/L		122	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	34.2		ng/L		85	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	33.6		ng/L		84	76 - 136
Perfluorobutanesulfonic acid (PFBS)	35.4	36.6		ng/L		104	67 - 127
Perfluoro-n-octadecanoic acid (PFODA)	40.0	37.1		ng/L		93	58 - 145

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

Lab Sample ID: LCS 320-418833/2-A
Matrix: Water
Analysis Batch: 419300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanesulfonic acid (PFPeS)	37.5	38.6		ng/L		103	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.8		ng/L		93	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	38.6		ng/L		101	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	35.8		ng/L		96	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	37.2		ng/L		97	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	36.6		ng/L		95	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	37.1		ng/L		93	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	41.6		ng/L		104	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.1		ng/L		98	76 - 136
4:2 FTS	37.4	38.2		ng/L		102	79 - 139
6:2 FTS	37.9	40.2		ng/L		106	59 - 175
8:2 FTS	38.3	38.7		ng/L		101	75 - 135
10:2 FTS	38.6	37.4		ng/L		97	64 - 142
NMeFOSA	40.0	42.3		ng/L		106	67 - 154
Perfluorododecanesulfonic acid (PFDoS)	38.7	35.2		ng/L		91	67 - 127
NMeFOSE	40.0	33.0		ng/L		83	70 - 130
NEtFOSE	40.0	34.9		ng/L		87	71 - 131
ADONA	39.5	42.7		ng/L		108	79 - 139
F-53B Major	37.3	37.6		ng/L		101	75 - 135
HFPO-DA (GenX)	40.0	40.3		ng/L		101	51 - 173
F-53B Minor	37.7	34.9		ng/L		93	54 - 114
NaDONA	40.0	43.2		ng/L		108	79 - 139
DONA	37.7	40.8		ng/L		108	79 - 139
Ammonium Perfluorooctanoate (APFO)	41.6	41.8		ng/L		101	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*77*		*25 - 150*
13C5 PFPeA	*85*		*25 - 150*
13C2 PFHxA	*88*		*25 - 150*
13C4 PFHpA	*85*		*25 - 150*
13C4 PFOA	*89*		*25 - 150*
13C5 PFNA	*96*		*25 - 150*
13C2 PFDA	*83*		*25 - 150*
13C2 PFHxDA	*81*		*25 - 150*
13C2 PFUnA	*83*		*25 - 150*
13C2 PFDoA	*66*		*25 - 150*
13C2 PFTeDA	*88*		*25 - 150*
13C3 PFBS	*76*		*25 - 150*
18O2 PFHxS	*73*		*25 - 150*
13C4 PFOS	*79*		*25 - 150*

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

Lab Sample ID: LCS 320-418833/2-A
Matrix: Water
Analysis Batch: 419300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418833

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	78		25 - 150
d3-NMeFOSAA	84		25 - 150
d5-NEtFOSAA	82		25 - 150
M2-6:2 FTS	91		25 - 150
M2-8:2 FTS	123		25 - 150
M2-4:2 FTS	89		25 - 150
d-N-MeFOSA-M	50		20 - 150
d-N-EtFOSA-M	31		20 - 150
d7-N-MeFOSE-M	28		10 - 120
d9-N-EtFOSE-M	17		10 - 120
13C3 HFPO-DA	86		25 - 150

Lab Sample ID: LCSD 320-418833/3-A
Matrix: Water
Analysis Batch: 419300

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 418833

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	43.9		ng/L		110	76 - 136	4	30
Perfluoropentanoic acid (PFPeA)			40.0	38.4		ng/L		96	71 - 131	8	30
Perfluorohexanoic acid (PFHxA)			40.0	42.0		ng/L		105	73 - 133	5	30
Perfluoroheptanoic acid (PFHpA)			40.0	38.7		ng/L		97	72 - 132	1	30
Perfluorooctanoic acid (PFOA)			40.0	38.4		ng/L		96	70 - 130	4	30
Perfluorononanoic acid (PFNA)			40.0	43.2		ng/L		108	75 - 135	19	30
Perfluorodecanoic acid (PFDA)			40.0	40.0		ng/L		100	76 - 136	1	30
Perfluoroundecanoic acid (PFUnA)			40.0	38.8		ng/L		97	68 - 128	8	30
Perfluorododecanoic acid (PFDoA)			40.0	47.2		ng/L		118	71 - 131	19	30
Perfluorotridecanoic acid (PFTriA)			40.0	43.0		ng/L		108	71 - 131	13	30
Perfluorotetradecanoic acid (PFTeA)			40.0	38.0		ng/L		95	70 - 130	11	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			40.0	33.5		ng/L		84	76 - 136	0	30
Perfluorobutanesulfonic acid (PFBS)			35.4	38.6		ng/L		109	67 - 127	5	30
Perfluoro-n-octadecanoic acid (PFODA)			40.0	37.4		ng/L		93	58 - 145	1	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	40.2		ng/L		107	66 - 126	4	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	35.9		ng/L		99	59 - 119	6	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	39.9		ng/L		105	76 - 136	3	30
Perfluorooctanesulfonic acid (PFOS)			37.1	36.7		ng/L		99	70 - 130	2	30
Perfluorononanesulfonic acid (PFNS)			38.4	38.8		ng/L		101	75 - 135	4	30
Perfluorodecanesulfonic acid (PFDS)			38.6	37.9		ng/L		98	71 - 131	3	30
Perfluorooctanesulfonamide (FOSA)			40.0	38.4		ng/L		96	73 - 133	3	30

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

Lab Sample ID: LCSD 320-418833/3-A
Matrix: Water
Analysis Batch: 419300

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 418833

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	42.6		ng/L		106	76 - 136	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	41.1		ng/L		103	76 - 136	5	30
4:2 FTS			37.4	40.0		ng/L		107	79 - 139	5	30
6:2 FTS			37.9	39.6		ng/L		104	59 - 175	2	30
8:2 FTS			38.3	41.1		ng/L		107	75 - 135	6	30
10:2 FTS			38.6	44.8		ng/L		116	64 - 142	18	30
NMeFOSA			40.0	43.7		ng/L		109	67 - 154	3	30
Perfluorododecanesulfonic acid (PFDoS)			38.7	34.2		ng/L		88	67 - 127	3	30
NMeFOSE			40.0	33.2		ng/L		83	70 - 130	1	30
NEtFOSE			40.0	34.7		ng/L		87	71 - 131	1	30
ADONA			39.5	43.8		ng/L		111	79 - 139	2	30
F-53B Major			37.3	39.3		ng/L		105	75 - 135	5	30
HFPO-DA (GenX)			40.0	40.7		ng/L		102	51 - 173	1	30
F-53B Minor			37.7	36.2		ng/L		96	54 - 114	4	30
NaDONA			40.0	44.3		ng/L		111	79 - 139	2	30
DONA			37.7	41.8		ng/L		111	79 - 139	2	30
Ammonium Perfluorooctanoate (APFO)			41.6	40.0		ng/L		96	70 - 130	4	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*81*		*25 - 150*
13C5 PFPeA	*87*		*25 - 150*
13C2 PFHxA	*90*		*25 - 150*
13C4 PFHpA	*88*		*25 - 150*
13C4 PFOA	*96*		*25 - 150*
13C5 PFNA	*97*		*25 - 150*
13C2 PFDA	*99*		*25 - 150*
13C2 PFHxDA	*90*		*25 - 150*
13C2 PFUnA	*108*		*25 - 150*
13C2 PFDoA	*80*		*25 - 150*
13C2 PFTeDA	*93*		*25 - 150*
13C3 PFBS	*80*		*25 - 150*
18O2 PFHxS	*79*		*25 - 150*
13C4 PFOS	*86*		*25 - 150*
13C8 FOSA	*86*		*25 - 150*
d3-NMeFOSAA	*93*		*25 - 150*
d5-NEtFOSAA	*97*		*25 - 150*
M2-6:2 FTS	*99*		*25 - 150*
M2-8:2 FTS	*112*		*25 - 150*
M2-4:2 FTS	*97*		*25 - 150*
d-N-MeFOSA-M	*54*		*20 - 150*
d-N-EtFOSA-M	*37*		*20 - 150*
d7-N-MeFOSE-M	*26*		*10 - 120*
d9-N-EtFOSE-M	*21*		*10 - 120*
13C3 HFPO-DA	*91*		*25 - 150*

QC Association Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

LCMS

Prep Batch: 418833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-65285-1	Trans Sump	Total/NA	Water	3535	
320-65285-2	Field Blank	Total/NA	Water	3535	
MB 320-418833/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-418833/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-418833/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 419300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-65285-2	Field Blank	Total/NA	Water	537 (modified)	418833
MB 320-418833/1-A	Method Blank	Total/NA	Water	537 (modified)	418833
LCS 320-418833/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	418833
LCSD 320-418833/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	418833

Analysis Batch: 419475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-65285-1	Trans Sump	Total/NA	Water	537 (modified)	418833

Lab Chronicle

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

Client Sample ID: Trans Sump

Lab Sample ID: 320-65285-1

Date Collected: 10/02/20 09:15

Matrix: Water

Date Received: 10/03/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			261.8 mL	10.00 mL	418833	10/05/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		20			419475	10/07/20 13:00	RS1	TAL SAC

Client Sample ID: Field Blank

Lab Sample ID: 320-65285-2

Date Collected: 10/02/20 09:40

Matrix: Water

Date Received: 10/03/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			253.5 mL	10.00 mL	418833	10/05/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1			419300	10/07/20 00:21	RS1	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 320-65285-1
Project/Site: ATC - Madison 60611431

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-21

Method Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
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 SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 320-65285-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-65285-1	Trans Sump	Water	10/02/20 09:15	10/03/20 09:30	
320-65285-2	Field Blank	Water	10/02/20 09:40	10/03/20 09:30	

Eurofins TestAmerica, ~~Chicago~~ Sacramento
~~2417 Bond Street~~
~~University Park, IL 60484~~
~~Phone: 708-534-5200 Fax: 708-534-5211~~

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information	Sampler: Joel Mackinney	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-74856-34868.2
Client Contact: Mr. Leo Linnemanstons, P.G.	Phone: 414 944 6185	E-Mail: sandie.fredrick@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #:
Address: 1350 Deming Way Suite 100	Due Date Requested: Normal TAT			
City: Middleton	TAT Requested (days):			
State, Zip: WI, 53562				
Phone: 608-836-9800(Tel)	PO #: Purchase Order Requested			
Email: leo.linnemanstons@aecom.com	WO #:			
Project Name: ATC - Blount 60611431	Project #: 50016386			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, 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)	PFC_IDA - PFAS 36 analyte list	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
Trans Sump	10/2/2020	0915	G	Water	N		X	2	
Trip Blank	10/2/2020	0940	G	~~Solid~~ Water	N		X	2	
				Solid					
				Solid					
				Solid					
				Solid					
				Solid					

320-65285 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ 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
Joel Mackinney	10/2/2020 1420	AECOM		10-2-20 1420	TA
	10-2-20 1700	TA		10/03/20 09:30	ETA-SAC

Custody Seals Intact: ✓ Yes △ No	Custody Seal No.: 991363	Cooler Temperature(s) °C and Other Remarks: OB: 1.7 CORR: 1.2

Ver: 01/16/2019

10 Field Blank 10/3/20

Login Sample Receipt Checklist

Client: AECOM

Job Number: 320-65285-1

Login Number: 65285
List Number: 1
Creator: Oropeza, Salvador

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	991363
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.	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 containers received and the COC.	False	IDs on containers do not match the COC. Logged in per COC.
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-184788-1
Client Project/Site: ATC - Madison 60611431

For:
AECOM
1350 Deming Way Suite 100
Middleton, Wisconsin 53562

Attn: Mr. Leo B Linnemanstons, P.G.

Sandie Fredrick

Authorized for release by:
7/20/2020 8:29:27 AM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

Table of Contents

Job ID: 500-184788-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative
500-184788-1

Comments
No additional comments.

Receipt
The samples were received on 7/11/2020 9:55 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2º C.

LCMS
Method 537 (modified): The laboratory control sample (LCS) for preparation batch 320-394928 and analytical batch 320-395225 recovered outside control limits for the following analytes: Perfluorotridecanoic acid (PFTriA). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit for d9-N-EtFOSE-M: SS-79 (500-184788-2), SS-82 (500-184788-5) and (LCS 320-394928/2-A). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s). .

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

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

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-394928. 3535 PFC Water 320-394928

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: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: FB 20200709 — Lab Sample ID: 500-184788-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.26	J B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.42	J B	1.9	0.33	ng/L	1		537 (modified)	Total/NA

Client Sample ID: SS-79 — Lab Sample ID: 500-184788-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.67	B	0.21	0.029	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.5		0.21	0.080	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.61		0.21	0.044	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.26		0.21	0.030	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.30	J B	0.52	0.21	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	13		2.1	0.16	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSE	0.048	J	0.21	0.038	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SS-80 — Lab Sample ID: 500-184788-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.21	B	0.20	0.029	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.090	J	0.20	0.079	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.046	J	0.20	0.043	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SS-81 — Lab Sample ID: 500-184788-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.27	B	0.20	0.028	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.37		0.20	0.077	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.17	J	0.20	0.042	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.039	J	0.20	0.029	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	1.3	J	2.0	0.15	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SS-82 — Lab Sample ID: 500-184788-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.27	B	0.22	0.031	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	3.6		2.2	0.16	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

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

Sample Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-184788-1	FB 20200709	Water	07/09/20 12:00	07/11/20 09:55	
500-184788-2	SS-79	Solid	07/09/20 13:15	07/11/20 09:55	
500-184788-3	SS-80	Solid	07/09/20 15:00	07/11/20 09:55	
500-184788-4	SS-81	Solid	07/09/20 15:15	07/11/20 09:55	
500-184788-5	SS-82	Solid	07/10/20 09:45	07/11/20 09:55	

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: FB 20200709
Date Collected: 07/09/20 12:00
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.33		1.9	0.33	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluoropentanoic acid (PFPeA)	<0.46		1.9	0.46	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorohexanoic acid (PFHxA)	<0.54		1.9	0.54	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.9	0.23	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorooctanoic acid (PFOA)	<0.80		1.9	0.80	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorononanoic acid (PFNA)	<0.25		1.9	0.25	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorodecanoic acid (PFDA)	<0.29		1.9	0.29	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorododecanoic acid (PFDoA)	<0.52		1.9	0.52	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorotridecanoic acid (PFTriA)	<1.2	*	1.9	1.2	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorotetradecanoic acid (PFTeA)	<0.27		1.9	0.27	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.83		1.9	0.83	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.43		1.9	0.43	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.9	0.28	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorohexanesulfonic acid (PFHxS)	**0.26**	**J B**	1.9	0.16	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.18		1.9	0.18	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorooctanesulfonic acid (PFOS)	<0.51		1.9	0.51	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorononanesulfonic acid (PFNS)	<0.15		1.9	0.15	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorooctanesulfonamide (FOSA)	**0.42**	**J B**	1.9	0.33	ng/L		07/14/20 18:37	07/15/20 19:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.9		19	2.9	ng/L		07/14/20 18:37	07/15/20 19:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		19	1.8	ng/L		07/14/20 18:37	07/15/20 19:28	1
4:2 FTS	<4.9		19	4.9	ng/L		07/14/20 18:37	07/15/20 19:28	1
6:2 FTS	<1.9		19	1.9	ng/L		07/14/20 18:37	07/15/20 19:28	1
8:2 FTS	<1.9		19	1.9	ng/L		07/14/20 18:37	07/15/20 19:28	1
10:2 FTS	<0.18		1.9	0.18	ng/L		07/14/20 18:37	07/15/20 19:28	1
NEtFOSA	<0.81		1.9	0.81	ng/L		07/14/20 18:37	07/15/20 19:28	1
NMeFOSA	<0.40		1.9	0.40	ng/L		07/14/20 18:37	07/15/20 19:28	1
Perfluorododecanesulfonic acid (PFDoS)	<0.42		1.9	0.42	ng/L		07/14/20 18:37	07/15/20 19:28	1
NMeFOSE	<1.3		3.7	1.3	ng/L		07/14/20 18:37	07/15/20 19:28	1
NEtFOSE	<0.80		1.9	0.80	ng/L		07/14/20 18:37	07/15/20 19:28	1
ADONA	<0.18		2.0	0.18	ng/L		07/14/20 18:37	07/15/20 19:28	1
F-53B Major	<0.22		1.9	0.22	ng/L		07/14/20 18:37	07/15/20 19:28	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		07/14/20 18:37	07/15/20 19:28	1
F-53B Minor	<0.30		1.9	0.30	ng/L		07/14/20 18:37	07/15/20 19:28	1
NaDONA	<0.18		2.0	0.18	ng/L		07/14/20 18:37	07/15/20 19:28	1
DONA	<0.17		1.9	0.17	ng/L		07/14/20 18:37	07/15/20 19:28	1
Ammonium Perfluorooctanoate (APFO)	<0.82		2.0	0.82	ng/L		07/14/20 18:37	07/15/20 19:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*49*		*25 - 150*	*07/14/20 18:37*	*07/15/20 19:28*	*1*
13C5 PFPeA	*50*		*25 - 150*	*07/14/20 18:37*	*07/15/20 19:28*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: FB 20200709
Date Collected: 07/09/20 12:00
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-1
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	52		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C4 PFHpA	56		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C4 PFOA	56		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C5 PFNA	57		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C2 PFDA	52		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C2 PFHxDA	66		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C2 PFUnA	57		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C2 PFDoA	60		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C2 PFTeDA	64		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C3 PFBS	60		25 - 150	07/14/20 18:37	07/15/20 19:28	1
18O2 PFHxS	63		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C4 PFOS	58		25 - 150	07/14/20 18:37	07/15/20 19:28	1
13C8 FOSA	55		25 - 150	07/14/20 18:37	07/15/20 19:28	1
d3-NMeFOSAA	55		25 - 150	07/14/20 18:37	07/15/20 19:28	1
d5-NEtFOSAA	56		25 - 150	07/14/20 18:37	07/15/20 19:28	1
M2-6:2 FTS	59		25 - 150	07/14/20 18:37	07/15/20 19:28	1
M2-8:2 FTS	67		25 - 150	07/14/20 18:37	07/15/20 19:28	1
M2-4:2 FTS	57		25 - 150	07/14/20 18:37	07/15/20 19:28	1
d-N-MeFOSA-M	38		20 - 150	07/14/20 18:37	07/15/20 19:28	1
d-N-EtFOSA-M	31		20 - 150	07/14/20 18:37	07/15/20 19:28	1
d7-N-MeFOSE-M	17		10 - 120	07/14/20 18:37	07/15/20 19:28	1
d9-N-EtFOSE-M	13		10 - 120	07/14/20 18:37	07/15/20 19:28	1
13C3 HFPO-DA	51		25 - 150	07/14/20 18:37	07/15/20 19:28	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: SS-79
Date Collected: 07/09/20 13:15
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-2
Matrix: Solid
Percent Solids: 94.4

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.67**	**B**	0.21	0.029	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluoropentanoic acid (PFPeA)	**1.5**		0.21	0.080	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorohexanoic acid (PFHxA)	**0.61**		0.21	0.044	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluoroheptanoic acid (PFHpA)	**0.26**		0.21	0.030	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorooctanoic acid (PFOA)	<0.090		0.21	0.090	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorononanoic acid (PFNA)	<0.038		0.21	0.038	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorodecanoic acid (PFDA)	<0.023		0.21	0.023	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluoroundecanoic acid (PFUnA)	<0.038		0.21	0.038	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorododecanoic acid (PFDoA)	<0.070		0.21	0.070	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorotridecanoic acid (PFTriA)	<0.053		0.21	0.053	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorotetradecanoic acid (PFTeA)	<0.056		0.21	0.056	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.046		0.21	0.046	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorobutanesulfonic acid (PFBS)	<0.026		0.21	0.026	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.029		0.21	0.029	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluoropentanesulfonic acid (PFPeS)	<0.021		0.21	0.021	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorohexanesulfonic acid (PFHxS)	<0.032		0.21	0.032	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.037		0.21	0.037	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorooctanesulfonic acid (PFOS)	**0.30**	**J B**	0.52	0.21	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorononanesulfonic acid (PFNS)	<0.021		0.21	0.021	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorodecanesulfonic acid (PFDS)	<0.041		0.21	0.041	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorooctanesulfonamide (FOSA)	<0.086		0.21	0.086	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.41		2.1	0.41	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.39		2.1	0.39	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
4:2 FTS	<0.39		2.1	0.39	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
6:2 FTS	**13**		2.1	0.16	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
8:2 FTS	<0.26		2.1	0.26	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
10:2 FTS	<0.052		0.21	0.052	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
NEtFOSA	<0.025		0.21	0.025	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
NMeFOSA	<0.043		0.21	0.043	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Perfluorododecanesulfonic acid (PFDoS)	<0.063		0.21	0.063	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
NMeFOSE	<0.074		0.21	0.074	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
NEtFOSE	**0.048**	**J**	0.21	0.038	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
ADONA	<0.020		0.22	0.020	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
F-53B Major	<0.028		0.21	0.028	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
HFPO-DA (GenX)	<0.11		0.26	0.11	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
F-53B Minor	<0.023		0.21	0.023	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
NaDONA	<0.020		0.22	0.020	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
DONA	<0.019		0.21	0.019	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1
Ammonium Perfluorooctanoate (APFO)	<0.093		0.22	0.093	ug/Kg	☼	07/15/20 07:15	07/18/20 03:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*90*		*25 - 150*	*07/15/20 07:15*	*07/18/20 03:44*	*1*
13C5 PFPeA	*85*		*25 - 150*	*07/15/20 07:15*	*07/18/20 03:44*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: SS-79
Date Collected: 07/09/20 13:15
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-2
Matrix: Solid
Percent Solids: 94.4

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	86		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C4 PFHpA	95		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C4 PFOA	95		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C5 PFNA	100		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C2 PFDA	90		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C2 PFHxDA	77		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C2 PFUnA	89		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C2 PFDoA	92		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C2 PFTeDA	82		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C3 PFBS	90		25 - 150	07/15/20 07:15	07/18/20 03:44	1
18O2 PFHxS	101		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C4 PFOS	90		25 - 150	07/15/20 07:15	07/18/20 03:44	1
13C8 FOSA	85		25 - 150	07/15/20 07:15	07/18/20 03:44	1
d3-NMeFOSAA	68		25 - 150	07/15/20 07:15	07/18/20 03:44	1
d5-NEtFOSAA	76		25 - 150	07/15/20 07:15	07/18/20 03:44	1
M2-6:2 FTS	105		25 - 150	07/15/20 07:15	07/18/20 03:44	1
M2-8:2 FTS	134		25 - 150	07/15/20 07:15	07/18/20 03:44	1
M2-4:2 FTS	100		25 - 150	07/15/20 07:15	07/18/20 03:44	1
d-N-MeFOSA-M	48		25 - 150	07/15/20 07:15	07/18/20 03:44	1
d-N-EtFOSA-M	45		25 - 150	07/15/20 07:15	07/18/20 03:44	1
d7-N-MeFOSE-M	10		10 - 120	07/15/20 07:15	07/18/20 03:44	1
d9-N-EtFOSE-M	9	*5	10 - 120	07/15/20 07:15	07/18/20 03:44	1
13C3 HFPO-DA	88		25 - 150	07/15/20 07:15	07/18/20 03:44	1

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: SS-80
Date Collected: 07/09/20 15:00
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-3
Matrix: Solid
Percent Solids: 94.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.21**	**B**	0.20	0.029	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluoropentanoic acid (PFPeA)	**0.090**	**J**	0.20	0.079	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorohexanoic acid (PFHxA)	**0.046**	**J**	0.20	0.043	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluoroheptanoic acid (PFHpA)	<0.030		0.20	0.030	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorooctanoic acid (PFOA)	<0.088		0.20	0.088	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorononanoic acid (PFNA)	<0.037		0.20	0.037	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorodecanoic acid (PFDA)	<0.022		0.20	0.022	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluoroundecanoic acid (PFUnA)	<0.037		0.20	0.037	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorododecanoic acid (PFDoA)	<0.068		0.20	0.068	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorotridecanoic acid (PFTriA)	<0.052		0.20	0.052	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorotetradecanoic acid (PFTeA)	<0.055		0.20	0.055	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.045		0.20	0.045	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorobutanesulfonic acid (PFBS)	<0.025		0.20	0.025	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.029		0.20	0.029	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluoropentanesulfonic acid (PFPeS)	<0.020		0.20	0.020	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorohexanesulfonic acid (PFHxS)	<0.032		0.20	0.032	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.036		0.20	0.036	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorooctanesulfonic acid (PFOS)	<0.20		0.51	0.20	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorononanesulfonic acid (PFNS)	<0.020		0.20	0.020	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorodecanesulfonic acid (PFDS)	<0.040		0.20	0.040	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorooctanesulfonamide (FOSA)	<0.084		0.20	0.084	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.40		2.0	0.40	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.38		2.0	0.38	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
4:2 FTS	<0.38		2.0	0.38	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
6:2 FTS	<0.15		2.0	0.15	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
8:2 FTS	<0.25		2.0	0.25	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
10:2 FTS	<0.051		0.20	0.051	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
NEtFOSA	<0.024		0.20	0.024	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
NMeFOSA	<0.042		0.20	0.042	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Perfluorododecanesulfonic acid (PFDoS)	<0.061		0.20	0.061	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
NMeFOSE	<0.072		0.20	0.072	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
NEtFOSE	<0.037		0.20	0.037	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
ADONA	<0.019		0.21	0.019	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
F-53B Major	<0.028		0.20	0.028	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
HFPO-DA (GenX)	<0.11		0.25	0.11	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
F-53B Minor	<0.022		0.20	0.022	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
NaDONA	<0.019		0.21	0.019	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
DONA	<0.018		0.20	0.018	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1
Ammonium Perfluorooctanoate (APFO)	<0.091		0.21	0.091	ug/Kg	☼	07/15/20 07:15	07/18/20 03:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*88*		*25 - 150*	*07/15/20 07:15*	*07/18/20 03:54*	*1*
13C5 PFPeA	*87*		*25 - 150*	*07/15/20 07:15*	*07/18/20 03:54*	*1*
13C2 PFHxA	*88*		*25 - 150*	*07/15/20 07:15*	*07/18/20 03:54*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: SS-80
Date Collected: 07/09/20 15:00
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-3
Matrix: Solid
Percent Solids: 94.5

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	97		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C4 PFOA	95		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C5 PFNA	99		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C2 PFDA	95		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C2 PFHxDA	81		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C2 PFUnA	87		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C2 PFDoA	81		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C2 PFTeDA	91		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C3 PFBS	95		25 - 150	07/15/20 07:15	07/18/20 03:54	1
18O2 PFHxS	96		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C4 PFOS	90		25 - 150	07/15/20 07:15	07/18/20 03:54	1
13C8 FOSA	86		25 - 150	07/15/20 07:15	07/18/20 03:54	1
d3-NMeFOSAA	77		25 - 150	07/15/20 07:15	07/18/20 03:54	1
d5-NEtFOSAA	85		25 - 150	07/15/20 07:15	07/18/20 03:54	1
M2-6:2 FTS	130		25 - 150	07/15/20 07:15	07/18/20 03:54	1
M2-8:2 FTS	133		25 - 150	07/15/20 07:15	07/18/20 03:54	1
M2-4:2 FTS	102		25 - 150	07/15/20 07:15	07/18/20 03:54	1
d-N-MeFOSA-M	62		25 - 150	07/15/20 07:15	07/18/20 03:54	1
d-N-EtFOSA-M	51		25 - 150	07/15/20 07:15	07/18/20 03:54	1
d7-N-MeFOSE-M	17		10 - 120	07/15/20 07:15	07/18/20 03:54	1
d9-N-EtFOSE-M	15		10 - 120	07/15/20 07:15	07/18/20 03:54	1
13C3 HFPO-DA	91		25 - 150	07/15/20 07:15	07/18/20 03:54	1

Client Sample ID: SS-81
Date Collected: 07/09/20 15:15
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-4
Matrix: Solid
Percent Solids: 94.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.27**	**B**	0.20	0.028	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluoropentanoic acid (PFPeA)	**0.37**		0.20	0.077	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorohexanoic acid (PFHxA)	**0.17**	**J**	0.20	0.042	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluoroheptanoic acid (PFHpA)	**0.039**	**J**	0.20	0.029	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorooctanoic acid (PFOA)	<0.086		0.20	0.086	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorononanoic acid (PFNA)	<0.036		0.20	0.036	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorodecanoic acid (PFDA)	<0.022		0.20	0.022	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluoroundecanoic acid (PFUnA)	<0.036		0.20	0.036	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorododecanoic acid (PFDoA)	<0.067		0.20	0.067	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorotridecanoic acid (PFTriA)	<0.051		0.20	0.051	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorotetradecanoic acid (PFTeA)	<0.054		0.20	0.054	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.044		0.20	0.044	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorobutanesulfonic acid (PFBS)	<0.025		0.20	0.025	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.028		0.20	0.028	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluoropentanesulfonic acid (PFPeS)	<0.020		0.20	0.020	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorohexanesulfonic acid (PFHxS)	<0.031		0.20	0.031	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.035		0.20	0.035	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorooctanesulfonic acid (PFOS)	<0.20		0.50	0.20	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorononanesulfonic acid (PFNS)	<0.020		0.20	0.020	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorodecanesulfonic acid (PFDS)	<0.039		0.20	0.039	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorooctanesulfonamide (FOSA)	<0.082		0.20	0.082	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.39		2.0	0.39	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.37		2.0	0.37	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
4:2 FTS	<0.37		2.0	0.37	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
6:2 FTS	**1.3**	**J**	2.0	0.15	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
8:2 FTS	<0.25		2.0	0.25	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
10:2 FTS	<0.050		0.20	0.050	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
NEtFOSA	<0.024		0.20	0.024	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
NMeFOSA	<0.041		0.20	0.041	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Perfluorododecanesulfonic acid (PFDoS)	<0.060		0.20	0.060	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
NMeFOSE	<0.071		0.20	0.071	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
NEtFOSE	<0.036		0.20	0.036	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
ADONA	<0.019		0.21	0.019	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
F-53B Major	<0.027		0.20	0.027	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
HFPO-DA (GenX)	<0.11		0.25	0.11	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
F-53B Minor	<0.022		0.20	0.022	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
NaDONA	<0.019		0.21	0.019	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
DONA	<0.018		0.20	0.018	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1
Ammonium Perfluorooctanoate (APFO)	<0.089		0.21	0.089	ug/Kg	☼	07/15/20 07:15	07/18/20 04:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*85*		*25 - 150*	*07/15/20 07:15*	*07/18/20 04:03*	*1*
13C5 PFPeA	*85*		*25 - 150*	*07/15/20 07:15*	*07/18/20 04:03*	*1*
13C2 PFHxA	*83*		*25 - 150*	*07/15/20 07:15*	*07/18/20 04:03*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: SS-81
Date Collected: 07/09/20 15:15
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-4
Matrix: Solid
Percent Solids: 94.5

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	94		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C4 PFOA	92		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C5 PFNA	93		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C2 PFDA	89		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C2 PFHxDA	86		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C2 PFUnA	88		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C2 PFDoA	96		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C2 PFTeDA	89		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C3 PFBS	83		25 - 150	07/15/20 07:15	07/18/20 04:03	1
18O2 PFHxS	97		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C4 PFOS	84		25 - 150	07/15/20 07:15	07/18/20 04:03	1
13C8 FOSA	87		25 - 150	07/15/20 07:15	07/18/20 04:03	1
d3-NMeFOSAA	75		25 - 150	07/15/20 07:15	07/18/20 04:03	1
d5-NEtFOSAA	85		25 - 150	07/15/20 07:15	07/18/20 04:03	1
M2-6:2 FTS	111		25 - 150	07/15/20 07:15	07/18/20 04:03	1
M2-8:2 FTS	116		25 - 150	07/15/20 07:15	07/18/20 04:03	1
M2-4:2 FTS	96		25 - 150	07/15/20 07:15	07/18/20 04:03	1
d-N-MeFOSA-M	55		25 - 150	07/15/20 07:15	07/18/20 04:03	1
d-N-EtFOSA-M	54		25 - 150	07/15/20 07:15	07/18/20 04:03	1
d7-N-MeFOSE-M	14		10 - 120	07/15/20 07:15	07/18/20 04:03	1
d9-N-EtFOSE-M	12		10 - 120	07/15/20 07:15	07/18/20 04:03	1
13C3 HFPO-DA	86		25 - 150	07/15/20 07:15	07/18/20 04:03	1

Client Sample ID: SS-82
Date Collected: 07/10/20 09:45
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-5
Matrix: Solid
Percent Solids: 86.6

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.27**	**B**	0.22	0.031	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluoropentanoic acid (PFPeA)	<0.084		0.22	0.084	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorohexanoic acid (PFHxA)	<0.046		0.22	0.046	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluoroheptanoic acid (PFHpA)	<0.032		0.22	0.032	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorooctanoic acid (PFOA)	<0.094		0.22	0.094	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorononanoic acid (PFNA)	<0.039		0.22	0.039	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorodecanoic acid (PFDA)	<0.024		0.22	0.024	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluoroundecanoic acid (PFUnA)	<0.039		0.22	0.039	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorododecanoic acid (PFDoA)	<0.073		0.22	0.073	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorotridecanoic acid (PFTriA)	<0.056		0.22	0.056	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorotetradecanoic acid (PFTeA)	<0.059		0.22	0.059	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.048		0.22	0.048	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorobutanesulfonic acid (PFBS)	<0.027		0.22	0.027	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.031		0.22	0.031	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluoropentanesulfonic acid (PFPeS)	<0.022		0.22	0.022	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorohexanesulfonic acid (PFHxS)	<0.034		0.22	0.034	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.038		0.22	0.038	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorooctanesulfonic acid (PFOS)	<0.22		0.55	0.22	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorononanesulfonic acid (PFNS)	<0.022		0.22	0.022	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorodecanesulfonic acid (PFDS)	<0.043		0.22	0.043	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorooctanesulfonamide (FOSA)	<0.090		0.22	0.090	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.43		2.2	0.43	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.40		2.2	0.40	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
4:2 FTS	<0.40		2.2	0.40	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
6:2 FTS	**3.6**		2.2	0.16	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
8:2 FTS	<0.27		2.2	0.27	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
10:2 FTS	<0.055		0.22	0.055	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
NEtFOSA	<0.026		0.22	0.026	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
NMeFOSA	<0.045		0.22	0.045	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Perfluorododecanesulfonic acid (PFDoS)	<0.066		0.22	0.066	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
NMeFOSE	<0.078		0.22	0.078	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
NEtFOSE	<0.039		0.22	0.039	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
ADONA	<0.021		0.23	0.021	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
F-53B Major	<0.029		0.22	0.029	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
HFPO-DA (GenX)	<0.12		0.27	0.12	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
F-53B Minor	<0.024		0.22	0.024	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
NaDONA	<0.021		0.23	0.021	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
DONA	<0.020		0.22	0.020	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1
Ammonium Perfluorooctanoate (APFO)	<0.097		0.23	0.097	ug/Kg	☼	07/15/20 07:15	07/18/20 04:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*25 - 150*	*07/15/20 07:15*	*07/18/20 04:13*	*1*
13C5 PFPeA	*88*		*25 - 150*	*07/15/20 07:15*	*07/18/20 04:13*	*1*
13C2 PFHxA	*91*		*25 - 150*	*07/15/20 07:15*	*07/18/20 04:13*	*1*

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: SS-82
Date Collected: 07/10/20 09:45
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-5
Matrix: Solid
Percent Solids: 86.6

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	96		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C4 PFOA	93		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C5 PFNA	100		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C2 PFDA	93		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C2 PFHxDA	90		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C2 PFUnA	89		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C2 PFDoA	98		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C2 PFTeDA	98		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C3 PFBS	98		25 - 150	07/15/20 07:15	07/18/20 04:13	1
18O2 PFHxS	103		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C4 PFOS	94		25 - 150	07/15/20 07:15	07/18/20 04:13	1
13C8 FOSA	92		25 - 150	07/15/20 07:15	07/18/20 04:13	1
d3-NMeFOSAA	72		25 - 150	07/15/20 07:15	07/18/20 04:13	1
d5-NEtFOSAA	81		25 - 150	07/15/20 07:15	07/18/20 04:13	1
M2-6:2 FTS	104		25 - 150	07/15/20 07:15	07/18/20 04:13	1
M2-8:2 FTS	104		25 - 150	07/15/20 07:15	07/18/20 04:13	1
M2-4:2 FTS	106		25 - 150	07/15/20 07:15	07/18/20 04:13	1
d-N-MeFOSA-M	53		25 - 150	07/15/20 07:15	07/18/20 04:13	1
d-N-EtFOSA-M	50		25 - 150	07/15/20 07:15	07/18/20 04:13	1
d7-N-MeFOSE-M	8	*5	10 - 120	07/15/20 07:15	07/18/20 04:13	1
d9-N-EtFOSE-M	7	*5	10 - 120	07/15/20 07:15	07/18/20 04:13	1
13C3 HFPO-DA	93		25 - 150	07/15/20 07:15	07/18/20 04:13	1

Definitions/Glossary

Client: AECOM
Job ID: 500-184788-1
Project/Site: ATC - Madison 60611431

Qualifiers

LCMS

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

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

LCMS

Prep Batch: 394928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-184788-1	FB 20200709	Total/NA	Water	3535	
MB 320-394928/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-394928/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-394928/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Prep Batch: 394939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-184788-2	SS-79	Total/NA	Solid	SHAKE	
500-184788-3	SS-80	Total/NA	Solid	SHAKE	
500-184788-4	SS-81	Total/NA	Solid	SHAKE	
500-184788-5	SS-82	Total/NA	Solid	SHAKE	
MB 320-394939/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-394939/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 395225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-184788-1	FB 20200709	Total/NA	Water	537 (modified)	394928
MB 320-394928/1-A	Method Blank	Total/NA	Water	537 (modified)	394928
LCS 320-394928/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	394928
LCSD 320-394928/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	394928

Analysis Batch: 395939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-184788-2	SS-79	Total/NA	Solid	537 (modified)	394939
500-184788-3	SS-80	Total/NA	Solid	537 (modified)	394939
500-184788-4	SS-81	Total/NA	Solid	537 (modified)	394939
500-184788-5	SS-82	Total/NA	Solid	537 (modified)	394939
MB 320-394939/1-A	Method Blank	Total/NA	Solid	537 (modified)	394939
LCS 320-394939/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	394939

General Chemistry

Analysis Batch: 394895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-184788-2	SS-79	Total/NA	Solid	D 2216	
500-184788-3	SS-80	Total/NA	Solid	D 2216	
500-184788-4	SS-81	Total/NA	Solid	D 2216	
500-184788-5	SS-82	Total/NA	Solid	D 2216	
500-184788-2 DU	SS-79	Total/NA	Solid	D 2216	

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-394928/1-A
Matrix: Water
Analysis Batch: 395225

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 394928

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.635	J	2.0	0.35	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluoropentanoic acid (PFPeA)	0.905	J	2.0	0.49	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorohexanoic acid (PFHxA)	0.741	J	2.0	0.58	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluoroheptanoic acid (PFHpA)	0.598	J	2.0	0.25	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorooctanoic acid (PFOA)	0.942	J	2.0	0.85	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorononanoic acid (PFNA)	0.597	J	2.0	0.27	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorodecanoic acid (PFDA)	0.566	J	2.0	0.31	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorododecanoic acid (PFDoA)	0.978	J	2.0	0.55	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorotetradecanoic acid (PFTeA)	1.12	J	2.0	0.29	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorobutanesulfonic acid (PFBS)	0.551	J	2.0	0.20	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.46		2.0	0.46	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluoropentanesulfonic acid (PFPeS)	0.526	J	2.0	0.30	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorohexanesulfonic acid (PFHxS)	0.702	J	2.0	0.17	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.517	J	2.0	0.19	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorooctanesulfonic acid (PFOS)	0.721	J	2.0	0.54	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorononanesulfonic acid (PFNS)	0.541	J	2.0	0.16	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorodecanesulfonic acid (PFDS)	0.570	J	2.0	0.32	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorooctanesulfonamide (FOSA)	1.17	J	2.0	0.35	ng/L		07/14/20 18:37	07/15/20 19:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<3.1		20	3.1	ng/L		07/14/20 18:37	07/15/20 19:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		20	1.9	ng/L		07/14/20 18:37	07/15/20 19:01	1
4:2 FTS	<5.2		20	5.2	ng/L		07/14/20 18:37	07/15/20 19:01	1
6:2 FTS	2.10	J	20	2.0	ng/L		07/14/20 18:37	07/15/20 19:01	1
8:2 FTS	<2.0		20	2.0	ng/L		07/14/20 18:37	07/15/20 19:01	1
10:2 FTS	0.717	J	2.0	0.19	ng/L		07/14/20 18:37	07/15/20 19:01	1
NEtFOSA	<0.87		2.0	0.87	ng/L		07/14/20 18:37	07/15/20 19:01	1
NMeFOSA	0.850	J	2.0	0.43	ng/L		07/14/20 18:37	07/15/20 19:01	1
Perfluorododecanesulfonic acid (PFDoS)	0.732	J	2.0	0.45	ng/L		07/14/20 18:37	07/15/20 19:01	1
NMeFOSE	<1.4		4.0	1.4	ng/L		07/14/20 18:37	07/15/20 19:01	1
NEtFOSE	<0.85		2.0	0.85	ng/L		07/14/20 18:37	07/15/20 19:01	1
ADONA	0.562	J	2.1	0.19	ng/L		07/14/20 18:37	07/15/20 19:01	1
F-53B Major	0.548	J	2.0	0.24	ng/L		07/14/20 18:37	07/15/20 19:01	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		07/14/20 18:37	07/15/20 19:01	1
F-53B Minor	0.595	J	2.0	0.32	ng/L		07/14/20 18:37	07/15/20 19:01	1
NaDONA	0.569	J	2.1	0.19	ng/L		07/14/20 18:37	07/15/20 19:01	1
DONA	0.537	J	2.0	0.18	ng/L		07/14/20 18:37	07/15/20 19:01	1
Ammonium Perfluorooctanoate (APFO)	0.980	J	2.1	0.88	ng/L		07/14/20 18:37	07/15/20 19:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*69*		*25 - 150*	*07/14/20 18:37*	*07/15/20 19:01*	*1*

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

Lab Sample ID: MB 320-394928/1-A
Matrix: Water
Analysis Batch: 395225

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 394928

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	71		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C2 PFHxA	72		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C4 PFHpA	83		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C4 PFOA	79		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C5 PFNA	84		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C2 PFDA	80		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C2 PFHxDA	88		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C2 PFUnA	81		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C2 PFDoA	81		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C2 PFTeDA	83		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C3 PFBS	77		25 - 150	07/14/20 18:37	07/15/20 19:01	1
18O2 PFHxS	82		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C4 PFOS	79		25 - 150	07/14/20 18:37	07/15/20 19:01	1
13C8 FOSA	75		25 - 150	07/14/20 18:37	07/15/20 19:01	1
d3-NMeFOSAA	77		25 - 150	07/14/20 18:37	07/15/20 19:01	1
d5-NEtFOSAA	79		25 - 150	07/14/20 18:37	07/15/20 19:01	1
M2-6:2 FTS	81		25 - 150	07/14/20 18:37	07/15/20 19:01	1
M2-8:2 FTS	89		25 - 150	07/14/20 18:37	07/15/20 19:01	1
M2-4:2 FTS	75		25 - 150	07/14/20 18:37	07/15/20 19:01	1
d-N-MeFOSA-M	54		20 - 150	07/14/20 18:37	07/15/20 19:01	1
d-N-EtFOSA-M	31		20 - 150	07/14/20 18:37	07/15/20 19:01	1
d7-N-MeFOSE-M	14		10 - 120	07/14/20 18:37	07/15/20 19:01	1
d9-N-EtFOSE-M	12		10 - 120	07/14/20 18:37	07/15/20 19:01	1
13C3 HFPO-DA	74		25 - 150	07/14/20 18:37	07/15/20 19:01	1

Lab Sample ID: LCS 320-394928/2-A
Matrix: Water
Analysis Batch: 395225

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	45.5		ng/L		114	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	39.5		ng/L		99	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	42.3		ng/L		106	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	38.9		ng/L		97	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	40.1		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	40.0	39.6		ng/L		99	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	39.5		ng/L		99	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	43.5		ng/L		109	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	48.0		ng/L		120	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	54.3	*	ng/L		136	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	43.7		ng/L		109	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	41.2		ng/L		103	76 - 136
Perfluorobutanesulfonic acid (PFBS)	35.4	37.1		ng/L		105	67 - 127
Perfluoro-n-octadecanoic acid (PFODA)	40.0	47.3		ng/L		118	58 - 145

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

Lab Sample ID: LCS 320-394928/2-A
Matrix: Water
Analysis Batch: 395225

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394928

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanesulfonic acid (PFPeS)	37.5	38.7		ng/L		103	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.8		ng/L		93	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	41.5		ng/L		109	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	38.7		ng/L		104	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	40.8		ng/L		106	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	39.3		ng/L		102	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	43.2		ng/L		108	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	46.3		ng/L		116	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	46.6		ng/L		117	76 - 136
4:2 FTS	37.4	41.0		ng/L		110	79 - 139
6:2 FTS	37.9	46.0		ng/L		121	59 - 175
8:2 FTS	38.3	47.9		ng/L		125	75 - 135
10:2 FTS	38.6	40.6		ng/L		105	64 - 142
NMeFOSA	40.0	44.8		ng/L		112	67 - 154
Perfluorododecanesulfonic acid (PFDoS)	38.7	38.5		ng/L		99	67 - 127
NMeFOSE	40.0	40.8		ng/L		102	70 - 130
NEtFOSE	40.0	39.6		ng/L		99	71 - 131
ADONA	39.5	42.2		ng/L		107	79 - 139
F-53B Major	37.3	37.9		ng/L		102	75 - 135
HFPO-DA (GenX)	40.0	43.9		ng/L		110	51 - 173
F-53B Minor	37.7	38.7		ng/L		103	54 - 114
NaDONA	40.0	42.8		ng/L		107	79 - 139
DONA	37.7	40.3		ng/L		107	79 - 139
Ammonium Perfluorooctanoate (APFO)	41.6	41.8		ng/L		100	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*61*		*25 - 150*
13C5 PFPeA	*63*		*25 - 150*
13C2 PFHxA	*64*		*25 - 150*
13C4 PFHpA	*71*		*25 - 150*
13C4 PFOA	*70*		*25 - 150*
13C5 PFNA	*75*		*25 - 150*
13C2 PFDA	*69*		*25 - 150*
13C2 PFHxDA	*71*		*25 - 150*
13C2 PFUnA	*71*		*25 - 150*
13C2 PFDoA	*60*		*25 - 150*
13C2 PFTeDA	*71*		*25 - 150*
13C3 PFBS	*69*		*25 - 150*
18O2 PFHxS	*71*		*25 - 150*
13C4 PFOS	*68*		*25 - 150*

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

Lab Sample ID: LCS 320-394928/2-A
Matrix: Water
Analysis Batch: 395225

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394928

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*66*		*25 - 150*
d3-NMeFOSAA	*65*		*25 - 150*
d5-NEtFOSAA	*64*		*25 - 150*
M2-6:2 FTS	*68*		*25 - 150*
M2-8:2 FTS	*76*		*25 - 150*
M2-4:2 FTS	*67*		*25 - 150*
d-N-MeFOSA-M	*47*		*20 - 150*
d-N-EtFOSA-M	*27*		*20 - 150*
d7-N-MeFOSE-M	*11*		*10 - 120*
d9-N-EtFOSE-M	*9*	**5*	*10 - 120*
13C3 HFPO-DA	*63*		*25 - 150*

Lab Sample ID: LCSD 320-394928/3-A
Matrix: Water
Analysis Batch: 395225

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 394928

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	45.1		ng/L		113	76 - 136	1	30
Perfluoropentanoic acid (PFPeA)			40.0	40.1		ng/L		100	71 - 131	1	30
Perfluorohexanoic acid (PFHxA)			40.0	41.7		ng/L		104	73 - 133	1	30
Perfluoroheptanoic acid (PFHpA)			40.0	40.4		ng/L		101	72 - 132	4	30
Perfluorooctanoic acid (PFOA)			40.0	38.3		ng/L		96	70 - 130	5	30
Perfluorononanoic acid (PFNA)			40.0	39.0		ng/L		97	75 - 135	2	30
Perfluorodecanoic acid (PFDA)			40.0	38.6		ng/L		97	76 - 136	2	30
Perfluoroundecanoic acid (PFUnA)			40.0	42.2		ng/L		106	68 - 128	3	30
Perfluorododecanoic acid (PFDoA)			40.0	38.5		ng/L		96	71 - 131	22	30
Perfluorotridecanoic acid (PFTriA)			40.0	40.5		ng/L		101	71 - 131	29	30
Perfluorotetradecanoic acid (PFTeA)			40.0	47.6		ng/L		119	70 - 130	9	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			40.0	42.1		ng/L		105	76 - 136	2	30
Perfluorobutanesulfonic acid (PFBS)			35.4	36.4		ng/L		103	67 - 127	2	30
Perfluoro-n-octadecanoic acid (PFODA)			40.0	37.9		ng/L		95	58 - 145	22	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	39.5		ng/L		105	66 - 126	2	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	34.9		ng/L		96	59 - 119	3	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	41.1		ng/L		108	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)			37.1	38.2		ng/L		103	70 - 130	1	30
Perfluorononanesulfonic acid (PFNS)			38.4	39.6		ng/L		103	75 - 135	3	30
Perfluorodecanesulfonic acid (PFDS)			38.6	38.8		ng/L		101	71 - 131	1	30
Perfluorooctanesulfonamide (FOSA)			40.0	42.7		ng/L		107	73 - 133	1	30

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

Lab Sample ID: LCSD 320-394928/3-A
Matrix: Water
Analysis Batch: 395225

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 394928

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	46.0		ng/L		115	76 - 136	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	44.3		ng/L		111	76 - 136	5	30
4:2 FTS			37.4	42.0		ng/L		113	79 - 139	3	30
6:2 FTS			37.9	41.6		ng/L		110	59 - 175	10	30
8:2 FTS			38.3	43.8		ng/L		114	75 - 135	9	30
10:2 FTS			38.6	41.8		ng/L		108	64 - 142	3	30
NMeFOSA			40.0	43.8		ng/L		110	67 - 154	2	30
Perfluorododecanesulfonic acid (PFDoS)			38.7	40.7		ng/L		105	67 - 127	6	30
NMeFOSE			40.0	41.5		ng/L		104	70 - 130	2	30
NEtFOSE			40.0	41.1		ng/L		103	71 - 131	4	30
ADONA			39.5	40.6		ng/L		103	79 - 139	4	30
F-53B Major			37.3	38.4		ng/L		103	75 - 135	1	30
HFPO-DA (GenX)			40.0	43.2		ng/L		108	51 - 173	2	30
F-53B Minor			37.7	38.9		ng/L		103	54 - 114	1	30
NaDONA			40.0	41.1		ng/L		103	79 - 139	4	30
DONA			37.7	38.8		ng/L		103	79 - 139	4	30
Ammonium Perfluorooctanoate (APFO)			41.6	39.8		ng/L		96	70 - 130	5	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*42*		*25 - 150*
13C5 PFPeA	*42*		*25 - 150*
13C2 PFHxA	*45*		*25 - 150*
13C4 PFHpA	*46*		*25 - 150*
13C4 PFOA	*49*		*25 - 150*
13C5 PFNA	*50*		*25 - 150*
13C2 PFDA	*49*		*25 - 150*
13C2 PFHxDA	*54*		*25 - 150*
13C2 PFUnA	*43*		*25 - 150*
13C2 PFDoA	*50*		*25 - 150*
13C2 PFTeDA	*51*		*25 - 150*
13C3 PFBS	*48*		*25 - 150*
18O2 PFHxS	*50*		*25 - 150*
13C4 PFOS	*47*		*25 - 150*
13C8 FOSA	*47*		*25 - 150*
d3-NMeFOSAA	*44*		*25 - 150*
d5-NEtFOSAA	*46*		*25 - 150*
M2-6:2 FTS	*48*		*25 - 150*
M2-8:2 FTS	*52*		*25 - 150*
M2-4:2 FTS	*45*		*25 - 150*
d-N-MeFOSA-M	*33*		*20 - 150*
d-N-EtFOSA-M	*25*		*20 - 150*
d7-N-MeFOSE-M	*13*		*10 - 120*
d9-N-EtFOSE-M	*10*		*10 - 120*
13C3 HFPO-DA	*44*		*25 - 150*

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

Lab Sample ID: MB 320-394939/1-A
Matrix: Solid
Analysis Batch: 395939

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 394939

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.180	J	0.20	0.028	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluoropentanoic acid (PFPeA)	<0.077		0.20	0.077	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorohexanoic acid (PFHxA)	<0.042		0.20	0.042	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluoroheptanoic acid (PFHpA)	<0.029		0.20	0.029	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorooctanoic acid (PFOA)	<0.086		0.20	0.086	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorononanoic acid (PFNA)	<0.036		0.20	0.036	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorodecanoic acid (PFDA)	<0.022		0.20	0.022	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluoroundecanoic acid (PFUnA)	<0.036		0.20	0.036	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorododecanoic acid (PFDoA)	<0.067		0.20	0.067	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorotridecanoic acid (PFTriA)	<0.051		0.20	0.051	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorotetradecanoic acid (PFTeA)	<0.054		0.20	0.054	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.044		0.20	0.044	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.025		0.20	0.025	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.028		0.20	0.028	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluoropentanesulfonic acid (PFPeS)	<0.020		0.20	0.020	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.031		0.20	0.031	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.035		0.20	0.035	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorooctanesulfonic acid (PFOS)	0.430	J	0.50	0.20	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorononanesulfonic acid (PFNS)	<0.020		0.20	0.020	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorodecanesulfonic acid (PFDS)	<0.039		0.20	0.039	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorooctanesulfonamide (FOSA)	<0.082		0.20	0.082	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.39		2.0	0.39	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.37		2.0	0.37	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
4:2 FTS	<0.37		2.0	0.37	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
6:2 FTS	<0.15		2.0	0.15	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
8:2 FTS	<0.25		2.0	0.25	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
10:2 FTS	<0.050		0.20	0.050	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
NEtFOSA	<0.024		0.20	0.024	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
NMeFOSA	<0.041		0.20	0.041	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Perfluorododecanesulfonic acid (PFDoS)	<0.060		0.20	0.060	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
NMeFOSE	<0.071		0.20	0.071	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
NEtFOSE	<0.036		0.20	0.036	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
ADONA	<0.019		0.21	0.019	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
F-53B Major	<0.027		0.20	0.027	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
HFPO-DA (GenX)	<0.11		0.25	0.11	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
F-53B Minor	<0.022		0.20	0.022	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
NaDONA	<0.019		0.21	0.019	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
DONA	<0.018		0.20	0.018	ug/Kg		07/15/20 07:15	07/18/20 01:42	1
Ammonium Perfluorooctanoate (APFO)	<0.089		0.21	0.089	ug/Kg		07/15/20 07:15	07/18/20 01:42	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*86*		*25 - 150*	*07/15/20 07:15*	*07/18/20 01:42*	*1*

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

Lab Sample ID: MB 320-394939/1-A
Matrix: Solid
Analysis Batch: 395939

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 394939

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	83		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C2 PFHxA	85		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C4 PFHpA	90		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C4 PFOA	89		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C5 PFNA	91		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C2 PFDA	87		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C2 PFHxDA	73		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C2 PFUnA	86		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C2 PFDoA	85		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C2 PFTeDA	88		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C3 PFBS	89		25 - 150	07/15/20 07:15	07/18/20 01:42	1
18O2 PFHxS	93		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C4 PFOS	82		25 - 150	07/15/20 07:15	07/18/20 01:42	1
13C8 FOSA	83		25 - 150	07/15/20 07:15	07/18/20 01:42	1
d3-NMeFOSAA	70		25 - 150	07/15/20 07:15	07/18/20 01:42	1
d5-NEtFOSAA	82		25 - 150	07/15/20 07:15	07/18/20 01:42	1
M2-6:2 FTS	96		25 - 150	07/15/20 07:15	07/18/20 01:42	1
M2-8:2 FTS	87		25 - 150	07/15/20 07:15	07/18/20 01:42	1
M2-4:2 FTS	87		25 - 150	07/15/20 07:15	07/18/20 01:42	1
d-N-MeFOSA-M	36		25 - 150	07/15/20 07:15	07/18/20 01:42	1
d-N-EtFOSA-M	40		25 - 150	07/15/20 07:15	07/18/20 01:42	1
d7-N-MeFOSE-M	17		10 - 120	07/15/20 07:15	07/18/20 01:42	1
d9-N-EtFOSE-M	16		10 - 120	07/15/20 07:15	07/18/20 01:42	1
13C3 HFPO-DA	88		25 - 150	07/15/20 07:15	07/18/20 01:42	1

Lab Sample ID: LCS 320-394939/2-A
Matrix: Solid
Analysis Batch: 395939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	2.00	2.45		ug/Kg		123	76 - 136
Perfluoropentanoic acid (PFPeA)	2.00	1.94		ug/Kg		97	69 - 129
Perfluorohexanoic acid (PFHxA)	2.00	2.02		ug/Kg		101	71 - 131
Perfluoroheptanoic acid (PFHpA)	2.00	1.86		ug/Kg		93	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	1.91		ug/Kg		95	72 - 132
Perfluorononanoic acid (PFNA)	2.00	2.00		ug/Kg		100	73 - 133
Perfluorodecanoic acid (PFDA)	2.00	2.04		ug/Kg		102	72 - 132
Perfluoroundecanoic acid (PFUnA)	2.00	2.08		ug/Kg		104	66 - 126
Perfluorododecanoic acid (PFDoA)	2.00	1.85		ug/Kg		93	71 - 131
Perfluorotridecanoic acid (PFTriA)	2.00	1.99		ug/Kg		99	71 - 131
Perfluorotetradecanoic acid (PFTeA)	2.00	2.11		ug/Kg		106	67 - 127
Perfluoro-n-hexadecanoic acid (PFHxDA)	2.00	2.31		ug/Kg		115	75 - 135
Perfluorobutanesulfonic acid (PFBS)	1.77	1.79		ug/Kg		101	69 - 129
Perfluoro-n-octadecanoic acid (PFODA)	2.00	2.46		ug/Kg		123	53 - 130

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

Lab Sample ID: LCS 320-394939/2-A
Matrix: Solid
Analysis Batch: 395939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.94		ug/Kg		103	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.63		ug/Kg		90	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	1.90	2.16		ug/Kg		113	76 - 136
Perfluorooctanesulfonic acid (PFOS)	1.86	2.20		ug/Kg		118	68 - 141
Perfluorononanesulfonic acid (PFNS)	1.92	2.12		ug/Kg		110	72 - 132
Perfluorodecanesulfonic acid (PFDS)	1.93	2.01		ug/Kg		104	71 - 131
Perfluorooctanesulfonamide (FOSA)	2.00	2.05		ug/Kg		103	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.32		ug/Kg		116	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.24		ug/Kg		112	72 - 132
4:2 FTS	1.87	2.16		ug/Kg		115	68 - 143
6:2 FTS	1.90	2.02		ug/Kg		106	73 - 139
8:2 FTS	1.92	2.07		ug/Kg		108	75 - 135
10:2 FTS	1.93	1.82		ug/Kg		94	69 - 145
NMeFOSA	2.00	2.01		ug/Kg		100	63 - 148
Perfluorododecanesulfonic acid (PFDoS)	1.94	2.04		ug/Kg		105	70 - 130
NMeFOSE	2.00	2.01		ug/Kg		101	43 - 153
NEtFOSE	2.00	2.24		ug/Kg		112	44 - 155
ADONA	1.97	2.37		ug/Kg		120	79 - 139
F-53B Major	1.86	2.06		ug/Kg		110	74 - 134
HFPO-DA (GenX)	2.00	2.03		ug/Kg		101	53 - 158
F-53B Minor	1.88	2.04		ug/Kg		108	66 - 136
NaDONA	2.00	2.39		ug/Kg		120	79 - 139
DONA	1.88	2.26		ug/Kg		120	79 - 139
Ammonium Perfluorooctanoate (APFO)	2.08	1.99		ug/Kg		95	72 - 132

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*86*		*25 - 150*
13C5 PFPeA	*81*		*25 - 150*
13C2 PFHxA	*82*		*25 - 150*
13C4 PFHpA	*91*		*25 - 150*
13C4 PFOA	*89*		*25 - 150*
13C5 PFNA	*86*		*25 - 150*
13C2 PFDA	*87*		*25 - 150*
13C2 PFHxDA	*74*		*25 - 150*
13C2 PFUnA	*84*		*25 - 150*
13C2 PFDoA	*87*		*25 - 150*
13C2 PFTeDA	*80*		*25 - 150*
13C3 PFBS	*88*		*25 - 150*
18O2 PFHxS	*89*		*25 - 150*
13C4 PFOS	*83*		*25 - 150*

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

Lab Sample ID: LCS 320-394939/2-A
Matrix: Solid
Analysis Batch: 395939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394939

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	78		25 - 150
d3-NMeFOSAA	72		25 - 150
d5-NEtFOSAA	79		25 - 150
M2-6:2 FTS	95		25 - 150
M2-8:2 FTS	84		25 - 150
M2-4:2 FTS	82		25 - 150
d-N-MeFOSA-M	31		25 - 150
d-N-EtFOSA-M	32		25 - 150
d7-N-MeFOSE-M	11		10 - 120
d9-N-EtFOSE-M	10		10 - 120
13C3 HFPO-DA	86		25 - 150

Lab Chronicle

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: FB 20200709
Date Collected: 07/09/20 12:00
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			394928	07/14/20 18:37	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	395225	07/15/20 19:28	S1M	TAL SAC

Client Sample ID: SS-79
Date Collected: 07/09/20 13:15
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	394895	07/14/20 16:35	TCS	TAL SAC

Client Sample ID: SS-79
Date Collected: 07/09/20 13:15
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-2
Matrix: Solid
Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			394939	07/15/20 07:15	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1	395939	07/18/20 03:44	AEC	TAL SAC

Client Sample ID: SS-80
Date Collected: 07/09/20 15:00
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	394895	07/14/20 16:35	TCS	TAL SAC

Client Sample ID: SS-80
Date Collected: 07/09/20 15:00
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-3
Matrix: Solid
Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			394939	07/15/20 07:15	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1	395939	07/18/20 03:54	AEC	TAL SAC

Client Sample ID: SS-81
Date Collected: 07/09/20 15:15
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	394895	07/14/20 16:35	TCS	TAL SAC

Lab Chronicle

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Client Sample ID: SS-81
Date Collected: 07/09/20 15:15
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-4
Matrix: Solid
Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			394939	07/15/20 07:15	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1	395939	07/18/20 04:03	AEC	TAL SAC

Client Sample ID: SS-82
Date Collected: 07/10/20 09:45
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	394895	07/14/20 16:35	TCS	TAL SAC

Client Sample ID: SS-82
Date Collected: 07/10/20 09:45
Date Received: 07/11/20 09:55

Lab Sample ID: 500-184788-5
Matrix: Solid
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			394939	07/15/20 07:15	EH	TAL SAC
Total/NA	Analysis	537 (modified)		1	395939	07/18/20 04:13	AEC	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 500-184788-1
Project/Site: ATC - Madison 60611431

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-21
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	07-01-21
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-21
Maine	State	2018009	04-14-22
Michigan	State	9947	01-31-22
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-21
New Jersey	NELAP	CA005	06-30-21
New York	NELAP	11666	04-01-21
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-21
Texas	NELAP	T104704399-19-13	06-01-21
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-21
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-21
West Virginia (DW)	State	9930C	12-31-20
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

eurofins

Client Information	Sampler: Joel Mackinney	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-83218-37927.1
Client Contact: Mr. Leo Linnemanstons, P.G	Phone: 9145202179	E-Mail: sandie.fredrick@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #: 500-184788
Address: 1350 Deming Way Suite 100	Due Date Requested:			
City: Middleton	TAT Requested (days):			
State, Zip: WI, 53562				
Phone: 608-836-9800(Tel)	PO #: 60611431			
Email: leo.linnemanstons@aecom.com	WO #: 500-184788 COC			
Project Name: ATC - Madison 60611431	Project #: 50016386			
Site:	SSOW#:			

Analysis Requested

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=wastesoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, Standard List (36 Analytes)	PFC_IDA - PFAS	Total Number of containers	Special Instructions/Note:
				Preservation Code:				N	N		
1	FB 20200709	7/9/20	1200	G	~~Solid~~ Water	N	N	X		2	WI 36 PFAS list
2	SS-79	7/9/20	1315	G	Solid	N	N	X		1	
3	SS-80	7/9/20	1500		Solid	N	N	X		1	
4	SS-81	7/9/20	1515		Solid	N	N	X		1	
5	SS-82	7/10/20	0945		Solid	N	N	X		1	
					Solid						
					Solid						
					Water						
					Water						
					Water						
					Water						

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		7/10/20 1200	AECOM		7-10-20 1200	TA
2		7-10-20 1700	TA	Stephanie Hernandez	7/10/20 0955	TA-CAL
3						

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2→1.2

Ver: 01/16/2019


ORIGIN ID:RRLA (262) 202-5955
SHIPPING
TESTAMERICA
4125 N 124TH ST

BROOKFIELD, WI 53005
UNITED STATES US

SHIP DATE: 10JUL20
ACTWGT: 36.55 LB
CAD: 525155/CAFE3211

BILL RECIPIENT

TO SAMPLE RECEIPT
TESTAMERICA LABS
2417 BOND STREET

UNIVERSITY PARK IL 60484
(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 7125 4942 9096

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO JOTA

60484
IL-US ORD

500-184788 Wayt

30 qt.

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-137404.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sandie.fredrick@testamericainc.com	State of Origin: Wisconsin	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Wisconsin		Job #: 500-184788-1
Address: 880 Riverside Parkway,	Due Date Requested: 7/23/2020			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: ATC - Madison 60611431	Project #: 50016386			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification - Client ID (Lab ID)	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/3535_PFC (MOD) PFAS, Standard List (36 Analytes)	PFC_IDA/Shake_Bath_14D (MOD) PFAS, Standard List (36 Analytes)	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FB 20200709 (500-184788-1)	7/9/20	12:00 Central		Water			X			2	
SS-79 (500-184788-2)	7/9/20	13:15 Central		Solid				X	X	1	
SS-80 (500-184788-3)	7/9/20	15:00 Central		Solid				X	X	1	
SS-81 (500-184788-4)	7/9/20	15:15 Central		Solid				X	X	1	
SS-82 (500-184788-5)	7/10/20	09:45 Central		Solid				X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification: Unconfirmed	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) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Allison Scott	7/13/20 1330	TAL CHI		7/14/20 - 1035	BASE
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:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
X Yes Δ No	137573	OBS 20 Corr 25

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: AECOM

Job Number: 500-184788-1

Login Number: 184788
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins TestAmerica, Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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	1.2
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 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.	True	
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	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 500-184788-1

Login Number: 184788
List Number: 2
Creator: Her, David A

List Source: Eurofins TestAmerica, Sacramento
List Creation: 07/14/20 12:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1371593
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.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.9c
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento
Sample Receiving Notes

500-184788 Field Sheet

Tracking # : 1893-4448-5737

Job: _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: AK-6 Corr. Factor: (+/-) 0.5 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 1371593

Cooler ID: _____

Temp Observed: 2.0 °C Corrected: 2.5 °C

From: Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Samples received within holding time?	☒	☐	☐

Initials: _____ Date: 7/14/20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Sample containers have legible labels?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Containers are not broken or leaking?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: DH Date: 7/14/20

Notes: _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
NCM Filed?	☐	☐	☒
Log Release checked in TALS?	☒	☐	☐

Initials: DH Date: 7/14/20

Isotope Dilution Summary

Client: AECOM
Project/Site: ATC - Madison 60611431

Job ID: 500-184788-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid **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)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFHxDA (25-150)
500-184788-2	SS-79	90	85	86	95	95	100	90	77
500-184788-3	SS-80	88	87	88	97	95	99	95	81
500-184788-4	SS-81	85	85	83	94	92	93	89	86
500-184788-5	SS-82	91	88	91	96	93	100	93	90
LCS 320-394939/2-A	Lab Control Sample	86	81	82	91	89	86	87	74
MB 320-394939/1-A	Method Blank	86	83	85	90	89	91	87	73

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
500-184788-2	SS-79	89	92	82	90	101	90	85	68
500-184788-3	SS-80	87	81	91	95	96	90	86	77
500-184788-4	SS-81	88	96	89	83	97	84	87	75
500-184788-5	SS-82	89	98	98	98	103	94	92	72
LCS 320-394939/2-A	Lab Control Sample	84	87	80	88	89	83	78	72
MB 320-394939/1-A	Method Blank	86	85	88	89	93	82	83	70

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	dMeFOSA (25-150)	dEtFOSA (25-150)	NMFM (10-120)	NEFM (10-120)
500-184788-2	SS-79	76	105	134	100	48	45	10	9 *5
500-184788-3	SS-80	85	130	133	102	62	51	17	15
500-184788-4	SS-81	85	111	116	96	55	54	14	12
500-184788-5	SS-82	81	104	104	106	53	50	8 *5	7 *5
LCS 320-394939/2-A	Lab Control Sample	79	95	84	82	31	32	11	10
MB 320-394939/1-A	Method Blank	82	96	87	87	36	40	17	16

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
500-184788-2	SS-79	88
500-184788-3	SS-80	91
500-184788-4	SS-81	86
500-184788-5	SS-82	93
LCS 320-394939/2-A	Lab Control Sample	86
MB 320-394939/1-A	Method Blank	88

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFHxDA = 13C2 PFHxDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS

Isotope Dilution Summary

Client: AECOM
Job ID: 500-184788-1
Project/Site: ATC - Madison 60611431

PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA

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)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFHxDA (25-150)
500-184788-1	FB 20200709	49	50	52	56	56	57	52	66
LCS 320-394928/2-A	Lab Control Sample	61	63	64	71	70	75	69	71
LCSD 320-394928/3-A	Lab Control Sample Dup	42	42	45	46	49	50	49	54
MB 320-394928/1-A	Method Blank	69	71	72	83	79	84	80	88

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
500-184788-1	FB 20200709	57	60	64	60	63	58	55	55
LCS 320-394928/2-A	Lab Control Sample	71	60	71	69	71	68	66	65
LCSD 320-394928/3-A	Lab Control Sample Dup	43	50	51	48	50	47	47	44
MB 320-394928/1-A	Method Blank	81	81	83	77	82	79	75	77

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	M262FTS (25-150)	M282FTS (25-150)	M242FTS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)
500-184788-1	FB 20200709	56	59	67	57	38	31	17	13
LCS 320-394928/2-A	Lab Control Sample	64	68	76	67	47	27	11	9 *5
LCSD 320-394928/3-A	Lab Control Sample Dup	46	48	52	45	33	25	13	10
MB 320-394928/1-A	Method Blank	79	81	89	75	54	31	14	12

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
500-184788-1	FB 20200709	51
LCS 320-394928/2-A	Lab Control Sample	63
LCSD 320-394928/3-A	Lab Control Sample Dup	44
MB 320-394928/1-A	Method Blank	74

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFHxDA = 13C2 PFHxDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA

Isotope Dilution Summary

Client: AECOM
Job ID: 500-184788-1
Project/Site: ATC - Madison 60611431

C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA

APPENDIX C – CONTAMINATED SOIL AND WATER DISPOSAL DOCUMENTATION

GENERATOR APPROVAL NOTIFICATION

Customer: NORTH SHORE ENVIRONMENTAL CONSTRUC February 3, 2020

ENVIRONMENTAL MANAGER
AMERICAN TRANSMISSION COMPANY
201 S. BLOUNT STREET
MADISON, WI 53703

This Generator Approval Notification acknowledges the acceptability of waste material(s) into the noted US Ecology ("USE") facility(s) identified below and ensures that each facility has the appropriate permit(s) issued by federal and state regulatory agencies to properly transport, treat, and/or dispose of the waste material(s).

The Approval(s) listed below are based upon characterization information supplied to USE by the Customer and the Generator (if other than the Customer). The Customer is ultimately responsible for the accuracy and completeness of all such information, whether provided by the Customer or the Generator. The Customer must notify USE immediately upon knowledge of any changes to this information. The Approval and all wastes which are transported, delivered, or tendered to USE under this Approval shall be subject to the Standard Terms and Conditions associated with the original Waste Profile Form. (The Standard Terms and Conditions are incorporated into the Waste Profile Form as Page 4.)

The Approval(s) will expire on the date(s) noted. Any new Approvals obtained from USE on future business will be valid for a period of one (1) year from the date of issuance. Within 60 days of the Approval Expiration Date, you will be notified of the requirements for recertification.

Generator: AMERICAN TRANSMISSION COMPANY
EPA ID No.: CESQG

Waste Common Name: LOW LEVEL PFAS CONTAMINATED SOILS
Waste Code(s):

Comments:

Approval No.: I198044WDI **Expiration Date:** 09/11/2020
USE Facility Name & ID Number: Wayne Disposal, Inc. (MID048090633)

PFAS Soil

Date	Manifest #	Qty	UOM
03/02/20	5093	24.92	Tons
03/02/20	5094	25.71	Tons
03/05/20	5095	12.31	Tons
04/15/20	4806	25.45	Tons
04/15/20	4807	23.02	Tons
04/15/20	4808	23.78	Tons
04/16/20	4809	25.47	Tons
07/21/20	5447	23.48	Tons
07/22/20	5448	25.44	Tons
07/22/20	5449	25.84	Tons
07/22/20	5451	24.30	Tons
07/22/20	5450	23.97	Tons
07/22/20	5446	28.86	Tons
07/27/20	5452	24.13	Tons
07/27/20	5453	24.17	Tons
07/27/20	5454	25.49	Tons
07/28/20	5458	26.76	Tons
07/28/20	5457	24.90	Tons
07/28/20	5456	24.39	Tons
07/28/20	5455	24.80	Tons
07/30/20	5474	17.87	Tons
	Total	**505.06**	

Invoice: 586591 Receipt 03-00 1325177 Bol 05093

78,860 TRUCK #106

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number CESQG 4	2. Page 1 of 1	3. Emergency Response Phone 262-255-4468	4. Waste Tracking Number 05093

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 800 999-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: U.S. Bulk Transport, Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	00020	Y	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603848
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: MaryEllen Mortensen
Month 03 Day 02 Year 2021

INTL
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Clinton DAVIS
Signature:
Month 03 Day 02 Year 2021
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
ok to update Section 1. ok per Dave J. 6.3.2.20
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Chris Gilmore
Signature:
Month 3 Day 2 Year 21

6-NHM-C-C-11 2-DESIGNATED FACILITY TO GENERATOR

12882663

8760 82980

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) CG

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number ~~GFS000 40CFR262~~ MRA	2. Page 1 of 1	3. Emergency Response Phone 262-255-4469	4. Waste Tracking Number 05094

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 800 - 999-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US Transportation — U.S. EPA ID Number: PAD 987347515

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 - 592-6489

U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1 Non regulated soils	001	DT	00020	Y	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603845
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator/Officer's Printed/Typed Name: Mary Ellen Martenson on behalf of ATC — Signature: MaryEllen Martenson — Month 3 Day 2 Year 20

INT'L
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Paul Moracevich — Signature — Month 3 Day 2 Year 20
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
ok to correct section 1 per Dave Johnson
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Chris Grissom — Signature — Month 3 Day 2 Year 20

6-NHM-C-C-11 2-DESIGNATED FACILITY TO GENERATOR

12858341

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number CESQG 40CFR261.5 mcc	2. Page 1 of 1	3. Emergency Response Phone 262-255-4468	4. Waste Tracking Number 05095

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 800 999-3204

Generator's Site Address (if different than mailing address)
ATC-Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: North Shore Environmental Construction, Inc. — U.S. EPA ID Number: WIR000117259

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill 358
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-6489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	CM BT	20	Y	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils. Profile # I188044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Officer's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: MaryEllen Mortensen
Month 3 Day 4 Year 20

INTL
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Luther Mitchell JR
Signature:
Month 3 Day 4 Year 20
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☒ Quantity ☒ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual quantity is 15 yards. Need load to correct Section/per Driver Johnson will SEC BC 3-5-20
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Reynaldo Salce Jr.
Signature:
Month 3 Day 5 Year 20

8-NHM-C-C-11 2-DESIGNATED FACILITY TO GENERATOR

12901445

US Bulk # 164 82,300

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number CF506 ~~40CFR262.34~~	2. Page 1 of 1	3. Emergency Response Phone 262-255-4468	4. Waste Tracking Number 04806

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name
~~North Shore Environmental Construction, Inc.~~ MF
U.S. EPA ID Number
WIR000117259

7. Transporter 2 Company Name
US Bulk Transport Inc
U.S. EPA ID Number
PAD057047515

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	CM	00020	Y	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: Mary Ellen Mortensen
Month 4 Day 15 Year 20

INTL

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: ____
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Michael Fabo
Signature: Michael Fabo
Month 4 Day 15 Year 20
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
ok to correct Section 1 per D. Jensen 4-15-20
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Adrian DiRisola
Signature: Adrian DiRisola
Month 4 Day 15 Year 20

6-NHM-C-0611

1-DESIGNATED FACILITY TO DESTINATION

134 7?/00

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	~~4 0 6 F R P A R T 7 0 1~~ C6526	1	262-255-4488	04807

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 888 809-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703
U.S. EPA ID Number

6. Transporter 1 Company Name
North Shore Environmental Construction, Inc.
U.S. EPA ID Number: WIR000117259

7. Transporter 2 Company Name
US BULK TRANSPORT INC
U.S. EPA ID Number: PAD 987342515

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	CM	00020	Y	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603948
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: Mary Ellen Mortensen
Month Day Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Signature: Month Day Year
Transporter 2 Printed/Typed Name: ARTHUR BULLOCK Signature: Arthur Bullock Month 4 Day 15 Year 20

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
ok to Correct Sec I per Dave C.G. 4-15-20 Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Antonio Cobson Signature: Month 4 Day 15 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

12998655

Tk# 198-2 80300

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number 40CFRPART761 CESQG	2. Page 1 of 1	3. Emergency Response Phone 262-255-4488	4. Waste Tracking Number 04808

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name
North Shore Environmental Construction, Inc.
U.S. EPA ID Number: WIR000117259

7. Transporter 2 Company Name
U.S. Bulk Transport Inc.
U.S. EPA ID Number: PAD 987347515

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	CM	00020	Y	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Marv Ellen Mortensen on behalf of ATC
Signature: MaryEllen Mortensen
Month / Day / Year

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Dan Williams
Signature: Dan
Month: 04 Day: 15 Year: 20

Transporter 2 Printed/Typed Name:
Signature:
Month / Day / Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
ok to Correct See Ipic Dave Johnson
Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month / Day / Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Antonio Cobson
Signature:
Month: 04 Day: 15 Year: 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

12998650

185 81,660

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number CES QG ~~40 CFR PART 262~~	2. Page 1 of 1	3. Emergency Response Phone 262-255-4488	4. Waste Tracking Number 04809

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name
North Shore Environmental Construction, Inc.
U.S. EPA ID Number: WIR000117259

7. Transporter 2 Company Name
US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5488
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	CM	00020	Y	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils. Profile # I198044WDI. WO# 603945
Job # 0A202

Trailer # 6559

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: Mary Ellen Mortensen
Month 4 Day 16 Year 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Corey Cormier
Signature:
Month 4 Day 16 Year 20
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☒ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK per Dave Johnson
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Adrian DeRosier
Signature:
Month 4 Day 16 Year 20

6-NHM-CC-H

1-DESIGNATED FACILITY TO DESTINATION

13013593

Invoice: 618728 **Receipt 03-00 1333359** **Bol 05447**

79,240

TRK 1616

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) AG

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number WICES 66 ~~40 CFR PART 761~~ | 2. Page 1 of 1 | 3. Emergency Response Phone 262-255-4488 | 4. Waste Tracking Number 05447

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 888 889-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703
U.S. EPA ID Number

6. Transporter 1 Company Name
U.S. Bulk Transport Inc
U.S. EPA ID Number
IDA0987247575

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5488
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	22	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils. Profile # I198044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: Mary Ellen Mortensen
Month 7 Day 21 Year 20

INTL
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Derek V. Holmes
Signature
Month 7 Day 21 Year 20
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to update gen id # per Dave Johnson W/NSEC
Manifest Reference Number:
U.S. EPA ID Number
17b. Alternate Facility (or Generator)
Facility's Phone:
Month Day Year
17c. Signature of Alternate Facility (or Generator)

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Antonio Cotson
Signature
Month 7 Day 21 Year 20

1-DESIGNATED FACILITY TO DESTINATION

6-NHM-C-C-11

13280171

83540

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number WCES96 — 40 CFR PART 761 | 2. Page 1 of 1 | 3. Emergency Response Phone 262-255-4488 | 4. Waste Tracking Number 05448

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name
US Bulk Transport Inc — U.S. EPA ID Number PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1 Non regulated soils	001	DT	24.	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

TRL 105 TRL 105-A

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: Mary Ellen Mortensen — Month 7 Day 21 Year 20

INTL
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kenneth D. Ard
Signature: Kenneth D. Ard — Month 7 Day 21 Year 20
Transporter 2 Printed/Typed Name:
Signature: Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☑ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to update Gen ID per Dave Johnson with NSEC. HS 7-26-21 Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Holt Scegg
Signature:
Month 7 Day 22 Year 20

8-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13280925

84260 TL142

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WICE896 ~~40CFRPART761~~
2. Page 1 of: 1
3. Emergency Response Phone: 262-255-4488
4. Waste Tracking Number: 05449

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US Bulk Transportation Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5488 — U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	22	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Officer's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: Mary Ellen Mortensen
Month 7 Day 21 Year 20

INT'L
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Lionel M Trowen
Signature: Lionel M Trowen
Month 7 Day 21 Year 20
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY
17 Discrepancy
17a Discrepancy Indication Space ☐ Quantity ☑ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
All to right bin ID per Dave Jansma with NSE. HE 7-22-20
Manifest Reference Number:
17b Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone
17c Signature of Alternate Facility (or Generator) — Month Day Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Chris Grissom
Signature
Month 7 Day 22 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13285407

truck 156 79,240

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number WICESQG ~~40CFRPART784~~	2. Page 1 of 1	3. Emergency Response Phone 262-255-4488	4. Waste Tracking Number 05451

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US Bulk transport INC — U.S. EPA ID Number: PAD 987 347 515

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489

U.S. EPA ID Number

9a. HM	9b U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	Est 23	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils. Profile # I198044WDI. WO# 603945
Job # 0A203

trailer 156A SSP 7-22-20

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC — Signature: MaryEllen Mortensen — Month 7 Day 22 Year 20

INT'L

15 International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jason Campos — Signature — Month 7 Day 22 Year 20

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

OK to update generator ID per Dave Johnson w/ WSEL
Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Antonio Cebron — Signature — Month 7 Day 22 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13282173

#152 78,860

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number WICES26 ~~40 CFR PART 261~~	2. Page 1 of 1	3. Emergency Response Phone 262-255-4488	4. Waste Tracking Number 05450

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 800 999-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US Bulk Transport Inc. U.S. EPA ID Number: PAD 987 347 515

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489

U.S. EPA ID Number:

9a HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	Est 23	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

#152

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: Mary Ellen Mortensen Month Day Year

INTL
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jimmy W Cramer Signature: Month 07 Day 22 Year 20
Transporter 2 Printed/Typed Name: Signature: Month 07 Day 22 Year 20

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
ok to update gen ID # per Dave Johnson w/ NSEC
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Antonio Cobos Signature: Month 7 Day 22 Year 20

6-NHM-C-C-11 1-DESIGNATED FACILITY TO DESTINATION

13282189

91320 178

Please print or type (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1 Generator ID Number WFCES96 ~~40CFRPART761~~	2 Page 1 of 1	3. Emergency Response Phone 262-255-4488	4. Waste Tracking Number 05446

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US Bulk Transport, Inc — U.S. EPA ID Number: FAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1 Non regulated soils	001	DT	CST. 22	T	NONE
	2.					
	3					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Marv Ellen Mortensen on behalf of ATC
Signature: Mary Ellen Mortensen
Month 7 Day 21 Year 20

INTL

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: BRIAN BACKNER
Signature:
Month 7 Day 21 Year 20

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☒ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
all together Gen ID for Mark Johnson with WSEC. 1/3 7-22-20
Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Chris Glerum
Signature:
Month 7 Day 23 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13285392

Invoice: 619109 **Receipt 03-00 1333695** **Bol 05452**

truck # 156 77,800

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number WICESQG ~~40CFRPART761~~	2. Page 1 of 1	3. Emergency Response Phone 262-255-4468	4. Waste Tracking Number 05452

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name
LS Bulk transport INC
U.S. EPA ID Number PAD 987347 515

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	Est 22	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: MaryEllenMortensen
Month 7 Day 27 Year 20

INTL

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: ____
Transporter signature (for exports only): Date leaving U.S.: ____

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jason Campos
Signature:
Month 7 Day 27 Year 20

Transporter 2 Printed/Typed Name:
Signature:
Month ____ Day ____ Year ____

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☑ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Ok to update sec. 1 per Dave Johnson w/ NSEC R.S. 7/27/2020
Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month ____ Day ____ Year ____

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Reynaldo Salce Jr.
Signature:
Month 07 Day 27 Year 20

6-NHM-C-C-11

1 DESIGNATED FACILITY TO DESTINATION

13287282

#152 79,300

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number ~~40CFRPART761~~ WICESQG	2. Page 1 of 1	3. Emergency Response Phone 262-255-4468	4. Waste Tracking Number 05453

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 888 892-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US Bulk Transport Inc. — U.S. EPA ID Number: PAD 987 347 515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	Est 23	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I190044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: MaryEllen Mortensen
Month 07 Day 27 Year 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.
Transporter signature (for exports only):

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Timothy W CRAMER
Signature:
Month 07 Day 27 Year 20
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☒ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to update sec. 1 per Dave Johnson w/NSEC R.S. 7/27/2020
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Reynaldo Salce Jr.
Signature:
Month 07 Day 27 Year 20

6-NHM-C-C-11 — 1-DESIGNATED FACILITY TO DESTINATION

13287559

84,340
TKK 186

AG

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number WICESQG ~~40CFRPART784~~	2. Page 1 of 1	3. Emergency Response Phone 262-255-4468	4. Waste Tracking Number 05454

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: U.S. Bulk Transport Inc — U.S. EPA ID Number: PAD987347576

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1 Non regulated soils	001	DT	22	T	NONE
	2.					
	3.					
	4					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils. Profile # I198044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: MaryEllen Mortensen
Month 7 Day 22 Year 20

INT'L

15. International Shipments ☐ Import to U.S ☐ Export from U.S Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Derek V. Holmes
Signature:
Month 7 Day 22 Year 20

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Antonio Cabrera
Signature:
Month 7 Day 22 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13287267

163 87460

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number ~~40CFRPART761~~ WICESQG	2. Page 1 of 1	3. Emergency Response Phone 282-255-4488	4. Waste Tracking Number 05458

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 800 889-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US Bulk Transport, Inc. — U.S. EPA ID Number: IPAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol	
	1. Non regulated soils	001	DT	22	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils. Profile # I198044WDI. WO# 603945
Job # 0A203
163A

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC — Signature: MaryEllen Mortensen — Month 7 Day 28 Year 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Shawn Harms — Signature — Month 7 Day 28 Year 20
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☒ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to update section 1 per Dave Johnson w/NSEC R.S. 7/28/2020
Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Antonio Gibson — Signature — Month 7 Day 28 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13288296

52,600

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number WICESQG ~~40CFRPART761~~	2. Page 1 of 1	3. Emergency Response Phone 262-255-4488	4. Waste Tracking Number 05457

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 889-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name
U.S. Bulk Transport Inc
U.S. EPA ID Number
PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	22	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: MaryEllen Mortensen
Month 7 Day 27 Year 20

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Transporter signature (for exports only): Port of entry/exit: Date leaving U.S.:

16 Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Joseph V. Holmes
Signature:
Month 7 Day 28 Year 20
Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☒ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to update section 1 per Dave Johnson W/NSEC R.S. 7/28/2020
Manifest Reference Number:

17b Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Antonio Gibson
Signature:
Month 7 Day 28 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13288491

#152 79,600

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number WICESQG ~~40CFRPART704~~ | 2. Page 1 of 1 | 3. Emergency Response Phone 282-255-4488 | 4. Waste Tracking Number 05456

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 800 999-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US BULK TRANSPORT INC. | U.S. EPA ID Number: PAD 987347 515

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489 | U.S. EPA ID Number

9a. HM	9b. U.S DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1 Non regulated soils	001	DT	~~ESY~~ 23	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

#152

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC | Signature: MaryEllen Mortensen | Month 07 Day 28 Year 20

INT'L
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Timmy W CRAMAR | Signature: Timmy W Cramar | Month 07 Day 28 Year 20
Transporter 2 Printed/Typed Name | Signature | Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to update gen id per Dave Johnson w/ NSEC
Manifest Reference Number: U.S. EPA ID Number
17b. Alternate Facility (or Generator)
Facility's Phone: Month Day Year
17c. Signature of Alternate Facility (or Generator)

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Antonio Cabsor | Signature: AC | Month 7 Day 29 Year 20

6-NHM-C-C-11 1-DESIGNATED FACILITY TO DESTINATION

13288486

truck 156 79.200

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number WIC5Q6 (~~40CFRPART704~~) | 2. Page 1 of 1 | 3. Emergency Response Phone 262-255-4468 | 4. Waste Tracking Number 05455

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 888 889-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: US Bulk transport INC — U.S. EPA ID Number: PAD987347585

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5488 — U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non regulated soils	001	DT	ESt 22	T	NONE
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # PA203

trailer 156A

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC — Signature: MaryEllen Mortensen — Month 7 Day 28 Year 20

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jason Campos — Signature — Month 7 Day 28 Year 20
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
OK to update generator ID per Dave Johnson w/ WSEE
Manifest Reference Number: — U.S. EPA ID Number

17b. Alternate Facility (or Generator)
Facility's Phone
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Antonio Cabson — Signature — Month 7 Day 28 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13288346

Invoice: 621252 **Receipt 03-00 1333995** **Bol 05474**

TRUCK 134 69080

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1 Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone	4. Waste Tracking Number
		262-255-4468	05474

GENERATOR

5. Generator's Name and Mailing Address
American Transmission Company
PO Box 47
Waukesha WI 53187
Generator's Phone: 866 899-3204

Generator's Site Address (if different than mailing address)
ATC - Blount
201 S Blount St
Madison WI 53703

6. Transporter 1 Company Name: CAS BULK TRANSPORT INC — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
Wayne Disposal, Inc Site #2 Landfill
49350 N I-94 Service Drive
Belleville MI 48111
Facility's Phone: 800 592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1 Non regulated soils	001	DT	20	T	NONE
	2					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) PFAS Contaminated Soils, Profile # I198044WDI. WO# 603945
Job # 0A203

14 GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC — Signature: Mary Ellen Mortensen — Month 7 Day 29 Year 20

INTL

15 International Shipments ☐ Import to U.S ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: ARTHUR POLLOCK — Signature — Month 7 Day 29 Year 20
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18 Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Holtschlag — Signature — Month 7 Day 30 Year 20

6-NHM-C-C-11

1-DESIGNATED FACILITY TO DESTINATION

13298532

PFAS Water

Date	Manifest #	Qty	UOM
09/04/20	140190	5,000.00	Gallons
09/04/20	090420-2	5,000.00	Gallons
09/08/20	140191	2,500.00	Gallons
	Total	**12,500.00**	

RECEIVING DOCUMENT #3

78160

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WIC ESQ G
2. Page 1 of: 1
3. Emergency Response Phone:
4. Waste Tracking Number: 140190

5. Generator's Name and Mailing Address: AMERICAN TRANSMISSION COMPAN
PO BOX 47
WAUKESHA WI 53187
Generator's Phone: (262) 506-6702

Generator's Site Address (if different than mailing address)
201 S BLOUNT STREET
MADISON, WI 53703

6. Transporter 1 Company Name: Keldon Trucking Inc. #31
U.S. EPA ID Number: ILD980903679

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMEI
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 980 724 001

GENERATOR

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Hazardous Liquid Waste, Not Del Not RCRA Regulated	1	TT	5000	G	029L PFAS
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
1. H208065MDI / Water contaminated with PFAS
Job# OA298 WO# 603931

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC
Signature: MaryEllen Mortensen
Month: 9 Day: 3 Year: 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Robert Shimota
Signature:
Month: 9 Day: 3 Year: 20

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

H110

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Antonio Gibson
Signature:
Month: 9 Day: 4 Year: 20

169-BLC-O 6 10498 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

Invoice: 630128 Receipt 02-00 610938 Bol 090420-2

74,080 LBS

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WIC ESU G
2. Page 1 of: 1
3. Emergency Response Phone: (262) 255-4468
4. Waste Tracking Number: 090420-2

5. Generator's Name and Mailing Address: AMERICAN TRANSMISSION COMPAN
PO BOX 47
WAUKESHA, WI 53187
Generator's Phone: (262) 506-6702

Generator's Site Address (if different than mailing address): 201 S BLOUNT STREET
MADISON, WI 53703

6. Transporter 1 Company Name: Keldon TruckKing
U.S. EPA ID Number: WID 988903579

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMEN
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489
U.S. EPA ID Number: MID 000 724 831

GENERATOR

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	Non Hazardous Liquid Waste, Not Soil Not RCRA Regulated	001	TT	5,000	G	029L PFAS
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
1. H208085MDI / Water contaminated with PFAS
Job# OA278 WO# 603931

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on Behalf of ATC
Signature: Mary Ellen Mortensen
Month 09 Day 3 Year 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chad Williams
Signature:
Month 9 Day 3 Year 20
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
Month Day Year
17c. Signature of Alternate Facility (or Generator)

H110

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Reynaldo Salce Jr.
Signature:
Month 09 Day 04 Year 20

DESIGNATED FACILITY TO GENERATOR

169-BLC-O 6 10498 (Rev. 9/09)

13417574

53960

NON-HAZARDOUS WASTE MANIFEST | 1. Generator ID Number: WIC ESQ G | 2. Page 1 of: 1 | 3. Emergency Response Phone: (262) 255-4488 | 4. Waste Tracking Number: 140191

5. Generator's Name and Mailing Address: AMERICAN TRANSMISSION COMPAN
PO BOX 47
WAUKESHA, WI 53187
Generator's Phone: (262) 506-6702

Generator's Site Address (if different than mailing address):
201 S. BLOUNT STREET
MADISON, WI 53703

6. Transporter 1 Company Name | U.S. EPA ID Number:

7. Transporter 2 Company Name: Reldonn Trucking Inc. II31 | U.S. EPA ID Number: ILD980903579

8. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMEN
49350 N I-94 SERVICE DRIVE
BELLEVILLE, MI 48111
Facility's Phone: (800) 592-5489

U.S. EPA ID Number: MID 000 724 831

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	Non Hazardous Liquid Waste, Not Dot Not RCRA Regulated	001	TT	2,500	G	020L PFAS
	2.					
	3. Tanker					
	4.					

13. Special Handling Instructions and Additional Information
1. H200805MDI / Water contaminated with PFAS
Job # OA203 WO # 603931

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Mary Ellen Mortensen on behalf of ATC | Signature: MaryEllen Mortensen | Month 9 | Day 3 | Year 20

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brian Schabe | Signature | Month 9 | Day 3 | Year 20

Transporter 2 Printed/Typed Name: Robert Shimnick | Signature | Month 9 | Day 8 | Year 20

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) | U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

H110

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Antonio Gibson | Signature | Month 9 | Day 8 | Year 20

169-BLC-O 6 10498 (Rev. 9/09) DESIGNATED FACILITY'S COPY

13421769