

3. Site Investigation Summary

A. General

- i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

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.
11. Site Investigation Report, ATC Blount Transmission Substation, Madison, Wisconsin. December 2020.

For additional details, including laboratory reports, please refer to previous submittals.

- ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts.
Based on the site investigation, PFAS impacts to soil and groundwater related to the AFFF discharged for fire suppression at the site appear to be limited to the site. Apparent unrelated PFAS impacts were detected in the City of Madison rights-of-way in street terraces surrounding the site. Soil PFAS impacts appeared to be limited to the ground surface to a depth of less than one foot, except in the immediate vicinity of the former transformer where PFAS impacts appear to have extended to the water table (approximately depth of 3 to 5 ft below ground surface). During construction for the replacement transformer, these impacted soils were excavated and properly disposed offsite at a licensed facility.
- iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.

The site has several impediments limiting the ability to conduct subsurface investigations. The presence of energized electrical equipment across the site both above and below ground surface limit the locations where borings or excavations can be conducted. In addition, because of the long history of industrial use, the site is known to contain numerous abandoned buried concrete and steel foundations and conduits that are also impediments to subsurface investigations.

None of these impediments are considered to serve as performance standard barriers for the protection of direct contact or the groundwater pathway for PFAS impacts.

B. Soil

- i. Describe degree and extent of soil contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways.
Ninety-two (92) target soil samples (duplicates not included) were collected and analyzed for PFAS during this investigation. As expected, the highest concentrations observed during the investigation were soils immediately surrounding the transformer, where the AFFF was discharged. Concentrations decrease radially from the transformer, with slightly elevated values in areas where the overflow of the AFFF mixture was directed. PFAS was detected in all samples, including background type samples from the surrounding City rights-of-way. Low levels of PFAS are known to be present widespread in the environment around the City of Madison, and it was not unexpected to find detections across all the samples.

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