

**Semi-Annual Progress Report-08
Selection and Design of Corrective Remedy
Clinch River Ash Pond 1**

**Clinch River Plant
Appalachian Power Company
Cleveland, Virginia**

February 2024 (Revision 1)

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1.0 BACKGROUND

The Ash Pond 1 site at the Clinch River Plant is subject to the federal CCR rule (40 CFR Part 257) and the Virginia Department of Environmental Quality (VA DEQ) solid waste regulations (9 VAC 20-81-800 *et seq.*). The pond is considered an inactive impoundment (out of service, but still containing standing water when the rule took effect on 19 October 2015), and is currently subject to 40 CFR Part 257, as amended in October 2016 to include Extension of Compliance Deadlines for Certain Inactive Impoundments and 9 VAC 20-81-820. The permitting process with VA DEQ for closing the impoundment began in October 2015, and in June 2017 VA DEQ issued Permit #620 for Ash Pond 1. Closure of Ash Pond 1 was completed in 2018.

As of this progress report, Virginia DEQ has not received CCR permit program authority from U.S. EPA to operate in lieu of the federal CCR rule, and American Electric Power (AEP) must comply with both regulations. This progress report focuses on the federal CCR rule requirements except where permit approval from VA DEQ is necessary to meet aspects of those federal requirements.

Sampling and analyses of groundwater from the monitoring network installed pursuant to 40 CFR §257.95 continues to identify the following Appendix IV constituents at statistically significant levels above the respective groundwater protection standards (GWPS): barium, cobalt, lithium, and molybdenum.

AEP identified two technically feasible alternatives for remediating the groundwater, which are listed. Alternative 2A is currently being evaluated.

Alternative #1: Source Removal with Monitored Natural Attenuation

Alternative #2: Groundwater Extraction, Treatment and Surface Water Discharge

Alternative #2A: Groundwater Extraction and Treatment at the Downgradient Edge of the Unit

Alternative #2B: Groundwater Extraction and Treatment at the Downgradient Edge of the Unit with Upgradient Barrier

Alternative #2C: Groundwater Extraction and Treatment at the Upgradient Unit Boundary.

The Assessment of Corrective Measures (ACM) report was prepared and posted to the Operating Record on December 11, 2019. A public meeting was conducted on December 19, 2019, in the town of Lebanon, Virginia to discuss the remediation technologies that are technically feasible for the specific site conditions at Ash Pond 1. A 30-day public comment period occurred from December 19, 2019, to January 20, 2020. One public comment was received during the 30-day period.

2.0 PURPOSE

This semiannual report is required by 40 CFR §257.97 and describes AEP's progress in selecting and designing the corrective measure(s) discussed in the ACM Report.

This report covers the period from: July 19, 2023 - January 18, 2024.

3.0 PROGRESS

The following summarizes the progress made towards remedy selection:

- May 19, 2021 AEP received comments from the VA DEQ regarding the ACM and Nature and Extent Study (NES) reports. Additional wells were installed, and additional sampling was conducted to address comments on the NES report.
- August 16, 2021 AEP partially addressed DEQ's comments and resubmitted the NES and ACM reports on August 25, 2021.
- December 2021, DEQ met with AEP to identify additional well locations for the NES and resubmittal of the NES/ACM after installation of the wells and completing a property boundary research/survey as requested by DEQ in May 2021.
- During 2022, new NES wells were installed and certified and sampled in Fall of 2022 to provide additional data to update the NES report.
- February 2023, AEP submitted a revised NES.
- March 2023 - AEP submitted a minor permit modification request to incorporate Federal Alternate groundwater protection standards (GPS) for CCR constituents. DEQ approved the minor permit modification on May 9, 2023.
- May 13, 2023 - AEP submitted a request to withdraw the NES/ACM that had previously been provided, to allow the facility to update the NES and ACM to account for the Federal Alternate GPS values (40 CFR 257.95(h)), and to update the property boundary in the NES/ACM and to collect surface water samples to complete the horizontal delineation of the exceedances.
- June 22, 2023 - DEQ approved the facility's request to withdraw the NES/ACM.
- September 19, 2023 – AEP submitted an updated NES, which is under DEQ's review.

AEP is currently working to revise the ACM based on additional data (e.g. well install, etc.) and updated GPS values (using Federal Alternate GPS). Approval of the final ACM and NES reports by VA DEQ is necessary before submitting a Corrective Action Plan and Corrective Action Monitoring Plan to modify the state permit and implement the selected remedy per the requirements in 9 VAC 20-81-260. This VA DEQ permit modification is needed prior to formally selecting the remedy that is required by the federal CCR Rule. AEP also conducted the semi-annual groundwater sampling and analysis during this report period. The results will be summarized in the report, "Annual Groundwater Monitoring and Corrective Action Report" to be posted to the operating record on January 31, 2024.

4.0 PLANNED WORK

AEP plans to continue to evaluate and advance the design of all the alternatives listed under Option #2 as a part of determining a final remedy.

AEP will respond to comments, if any, on the ACM and NES reports submitted to VA DEQ.

AEP will sample all the certified groundwater monitoring network wells and evaluate the results as part of the semi-annual requirement.

AEP will submit another progress report by July 18, 2024.

Appendix 1
(Record of Changes)

This document was revised to reflect comments received from the Virginia Department of Environmental Quality on February 14, 2024.