



Charles R. Lowman Power Plant
Coal Combustion Residuals (CCR) Surface Impoundment Remedy
Selection and Design: Semi-Annual Progress Report
December 2021

Regulations codified at 40 C.F.R. § 257.97(a) and Alabama Department of Environmental Management (ADEM) Admin. Code r. 335-13-15-.06(8)(a) require the selection of a remedy and the preparation of “a semiannual report describing the progress in selecting and designing the remedy” until a remedy is selected. PowerSouth Energy Cooperative submitted an Assessment of Corrective Measures (ACM), on July 11, 2019, for the Charles R. Lowman Power Plant. The ACM identified and evaluated monitored natural attenuation (MNA), a permeable treatment barrier, and groundwater recovery and treatment as potential remedies. The ACM recommended MNA as the primary remedy. In response to comments provided by ADEM, a Revised ACM was prepared and submitted on May 5, 2020. The Revised ACM provided additional information, including the anticipated effects of source control. The ACM discussed potential corrective measures and again recommended MNA as the primary remedy. As described below, PowerSouth is also considering additional engineering control measures to address one specific area. Both versions of the ACM are available on the CCR compliance website for the Lowman Power Plant. To fulfill the requirements of 40 CFR §257.96(e) and ADEM Admin Code r. 335-13-15-.06(7)(e) PowerSouth hosted a public meeting at the Jackson Community Center in Jackson, Alabama on June 29, 2020.

During the semi-annual period since the previous progress report submitted in June 2021, the following activities have been completed:

- PowerSouth has reviewed and provided responses to additional comments from ADEM concerning the submitted Revised ACM.
- PowerSouth submitted a response to ADEM’s comments regarding the Lowman Corrective Action Plan (CAP) in July 2021. The CAP outlines the procedures and timeline for implementation of the proposed remedy.
- Site groundwater data continues to be collected and compiled in support of evaluating the effectiveness of MNA as the proposed site groundwater remedy.

- PowerSouth completed the installation of an additional delineation well (MW-14B) to aid in the vertical delineation of the Appendix III and Appendix IV constituents within the shallow alluvial aquifer beneath the Lowman facility. MW-14B was installed in accordance with the procedures detailed in the Alabama Environmental Investigation and Remediation Guidance (AEIRG) for the completion of Type II monitoring wells. The well was installed using a track-mounted sonic drilling rig to a depth of approximately 64 feet below ground level. During the September 2021 Semi-Annual Assessment Monitoring activities, a groundwater sample was collected from MW-14B using low-flow purging and sampling techniques in accordance with the procedures detailed in the Revised Sampling and Analysis Plan for the Lowman facility. Delineation well MW-14B will continue to be sampled on a semiannual basis in conjunction with the compliance monitoring schedule for the Lowman facility. A detailed discussion of the installation procedures and sampling results will be included in the Annual Groundwater Monitoring Report to be submitted in January 2022.
- PowerSouth has prepared updates to site groundwater geochemical maps (DO, ORP, pH, and alkalinity), and created charts of Appendix IV constituents and geochemical parameters versus time for key monitoring wells in an effort to determine if correlations exist between the Appendix IV constituents and geochemical parameters. These charts will be included in Semi-Annual and Annual GW Monitoring reports as they are completed.
- PowerSouth has initiated evaluation of seasonal variations in hydraulic gradients and its potential effects on COC concentrations.

Efforts to negotiate an access agreement to install an off-site delineation well on the adjacent property to the south of the Lowman facility were unsuccessful. PowerSouth is evaluating engineering control measures that could be implemented along the southern property boundary to ensure that any groundwater impacts from the CCR pond would be contained within the Lowman site boundaries. PowerSouth is in the process of completing an installation plan and schedule that will be submitted to ADEM for review and approval.

PowerSouth has installed and is currently operating a dewatering treatment system used for removing and treating residual wastewater from the interconnected, multiunit CCR pond system in support of the closure of the CCR pond. Dewatering commenced in September 2021.