

January 8, 2024

SEMIANNUAL REMEDY SELECTION PROGRESS REPORT COFFEEN POWER PLANT ASH POND NO. 2

In accordance with Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.97(a), the owner or operator of a coal combustion residuals (CCR) unit must prepare a semiannual report describing the progress in selecting and designing a remedy for statistically significant levels (SSLs) of constituents listed in Appendix IV of 40 C.F.R. § 257 over the groundwater protection standards established in accordance with 40 C.F.R. § 257.95(h).

This report is for activities occurring between July 9, 2023 and January 8, 2024 at Ash Pond No. 2 (AP2) at Coffeen Power Plant.

Assessment monitoring was completed at AP2 during Quarter 3, 2023 in accordance with 40 C.F.R. § 257.95 and SSL identification is pending (due February 19, 2024). A cobalt SSL was identified during the previous assessment monitoring event completed during Quarter 1, 2023, as stated in the related notification dated October 20, 2023. With the alternative source demonstration (ASD) for the cobalt SSL referenced below, and the lack of any other SSLs, further evaluation of corrective action is not warranted for AP2. Results from the most recent and future sampling events will be evaluated to determine if evaluation of corrective action should resume.

As stated in previous Semiannual Remedy Selection Progress Reports, a Corrective Measures Assessment (CMA) was completed for cobalt exceedances at AP2 on July 8, 2019 as required by 40 C.F.R. § 257.96. This CMA was revised on November 30, 2020 to address cobalt and lithium based on 2020 assessment monitoring results, to include additional information related to site geology/hydrogeology, and to focus on application of the evaluation factors identified in 40 C.F.R. § 257.96(c) pertaining to potential groundwater corrective measures. Additional revisions were made to the CMA on January 6, 2023 to include an ASD for cobalt and additional site geology/hydrogeology information gained during site investigation activities in 2021 related to permitting required by Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845.

The CMA indicated the source control measure for AP2 would be closure in place with a geomembrane cover system. Construction of the geomembrane cover system began in July of 2019 and was completed on November 17, 2020 in accordance with the Closure and Post Closure Care Plan approved by IEPA on January 30, 2018.

AP2 is located in the State of Illinois and is also subject to compliance with 35 I.A.C. § 845. An application for an operating permit required for AP2 by 35 I.A.C. § 845.230 was submitted to the Illinois Environmental Protection Agency (IEPA) by October 31, 2021 and is pending approval. An evaluation of background groundwater quality was completed and presented in the operating permit application. The operating permit application and related documents can be found on the publicly available CCR website: <https://www.luminant.com/ccr/illinois-ccr/>. Quarterly groundwater sampling for Part 845 compliance evaluation in accordance with 35 I.A.C. § 845.640 was initiated at AP2 during Quarter 2, 2023. Exceedances of groundwater protection standards established under 35 I.A.C. § 845 were determined and require corrective action through a permitting process administered by IEPA.

Remedy selection will take into consideration compliance with both 40 C.F.R. § 257 and 35 I.A.C. § 845. As required by 35 I.A.C. § 845.670, a corrective action plan that identifies the selected remedy must be submitted to IEPA within one year after completing the CMA required by 35 I.A.C. § 845.660. It is anticipated that a corrective action plan will be submitted in 2025 that meets the requirements of both 40 C.F.R. § 257 and 35 I.A.C. § 845.