

September 5, 2022

SEMIANNUAL REMEDY SELECTION PROGRESS REPORT OLD WEST ASH POND (POND NO. 1 AND POND NO. 3) AND POLISHING POND HENNEPIN POWER PLANT

In accordance with Title 40 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).

The Old West Ash Pond is located in the State of Illinois and is also subject to the state's CCR program located at Title 35 of the Illinois Administrative Code (35 I.A.C.) Part 845. An application for an operating permit for the Old West Ash Pond required 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. Exceedances of groundwater protection standards established under Part 845 require corrective action through a permitting process administered by IEPA. The operating permit application and related documents can be found on the company's publicly available CCR website: <https://www.luminant.com/ccr/illinois-ccr/>

This report is for activities occurring between March 6, 2022, and September 5, 2022, at the Old West Ash Pond (Pond No. 1 and Pond No. 3) and Polishing Pond, collectively referred to as the OWAP, at Hennepin Power Plant.

As stated in the March 5, 2020, Semiannual Remedy Selection Progress Report, a Corrective Measures Assessment (CMA) was completed for the OWAP on September 5, 2019, to address SSLs for total arsenic, total lithium, and total molybdenum (see related notification dated February 6, 2019), as required by 40 C.F.R. § 257.96. The CMA evaluated closure in place with a geomembrane cover system and Monitored Natural Attenuation (MNA) in accordance with the Closure and Post Closure Care Plan submitted to the Illinois Environmental Protection Agency (IEPA) in January 2018. IEPA approved the Closure and Post Closure Care Plan on June 19, 2018. Closure construction began in August of 2019 and was completed in November of 2020.

As stated in the September 5, 2020, Semiannual Remedy Selection Progress Report, existing groundwater and source water data were reviewed, as well as identification and collection of additional groundwater and source water samples to evaluate the feasibility of MNA. These data indicate that site-specific conditions appear favorable for implementation of MNA in combination with the recently completed closure referenced above.

Additional activities were completed during the reporting period. These activities include bench scale testing, including characterization of the materials and batch adsorption tests, to better understand natural attenuation mechanisms, rates, and aquifer capacity. A site-specific attenuation capacity for molybdenum was calculated using the results of the bench scale testing. Testing is ongoing to determine site-specific attenuation capacities for arsenic and lithium. Additional analysis of the bench scale testing results is ongoing, including evaluating the reversibility of these constituents' attenuation mechanisms under varying site conditions. Analysis of natural attenuation mechanisms, rates, and aquifer capacity is needed to complete the tiered evaluation referenced in United States Environmental Protection Agency (USEPA) guidance, including development of a geochemical conceptual site model. These activities are necessary to understand the natural attenuation mechanisms occurring at the site and their potential ability to reduce the

aqueous concentrations of total arsenic, total lithium, and total molybdenum to below the applicable groundwater protection standards.

As stated in the notification dated February 12, 2022, SSLs for total arsenic, total lithium, total molybdenum, and total thallium were identified at the OWAP following assessment monitoring completed during the reporting period in accordance with 40 C.F.R. § 257.95, with total thallium being a new SSL for the OWAP. An Alternate Source Demonstration (ASD) for the new total thallium SSL was completed with related documentation submitted to the OWAP operating record on April 13, 2022. This ASD will be provided in the 2022 Annual Groundwater Monitoring and Corrective Action Report, as required by 40 C.F.R. § 257.90(e).

Remedy selection will take into consideration compliance with both 40 C.F.R. § 257 and 35 I.A.C. Part 845, the latter of which cannot be completed until IEPA approves the groundwater monitoring program and issues an operating permit. In accordance with 40 C.F.R. § 257.97, remedy selection is to be completed as soon as feasible following completion of the corrective measures assessment. 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 assessment of corrective measures. It is anticipated that these activities related to 35 I.A.C. Part 845 compliance will occur in 2023 with submittal of a corrective action plan in 2024 that meets both 40 C.F.R. § 257 and 35 I.A.C. Part 845.