

March 5, 2021

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

In accordance with Title 40 Code of Federal Regulations (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. Part 257 over the groundwater protection standards established in accordance with 40 C.F.R. § 257.95(h).

This report is for activities occurring between September 5, 2020 and March 5, 2021 at the Old West Ash Pond (Pond No. 1 and Pond No. 3) and Polishing Pond at Hennepin Power Station.

As stated in the March 5, 2020 Semiannual Remedy Selection Progress Report, a Corrective Measures Assessment (CMA) was completed for the Old West Ash Pond (Pond No. 1 and Pond No. 3) and Polishing Pond, collectively referred to as the OWAP, on September 5, 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 completed during the reporting period associated with the selection of a groundwater remedy include completion of a field sampling plan identifying additional field data collection to be completed in 2021 to support analysis of natural attenuation mechanisms, rates, and aquifer capacity. Soil borings were obtained as part of this field sampling plan near monitoring wells 22, 34, and 51 to collect aquifer solids for laboratory bench scale testing. Illinois River levels are being monitored to evaluate when flooding events occur so samples can be collected to investigate how flood events affect concentration levels in groundwater. 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 13, 2021, SSLs for total arsenic, total lithium, and total molybdenum were identified at the Old West Ash Pond (Pond No. 1 and Pond No. 3) and Polishing Pond during assessment monitoring completed in accordance with 40 C.F.R. § 257.95.