

September 5, 2021

## **SEMIANNUAL REMEDY SELECTION PROGRESS REPORT BALDWIN FLY ASH POND SYSTEM**

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 March 6, 2021 and September 5, 2021 at the Fly Ash Pond System at the Baldwin Power Plant.

As stated in previous Semiannual Remedy Selection Progress Reports, a Corrective Measures Assessment (CMA) was completed for the Fly Ash Pond System on September 5, 2019 to address an SSL for total lithium (see related notification dated February 6, 2019), as required by 40 C.F.R. § 257.96. The CMA was revised on November 15, 2019 to address typographical errors. Additional revisions were made to the CMA on November 30, 2020 to include additional information related to site geology/hydrogeology and the potential groundwater corrective measures of Monitored Natural Attenuation (MNA), permeable reactive barrier, and in-situ chemical treatment.

The CMA indicated the source control measure consists of closure in place with a final cover system of earthen material in accordance with the Closure and Post Closure Care Plan for the Baldwin Fly Ash Pond System submitted to the Illinois Environmental Protection Agency (IEPA) in March 2016. IEPA approved the Closure and Post Closure Care Plan on August 16, 2016. Construction of the final cover system was initiated in 2018 and completed in November 2020.

Additional activities completed during the reporting period associated with the selection of a groundwater remedy include monthly groundwater elevation monitoring at three (3) surface water staff gauges installed in September 2020 and eleven (11) groundwater monitoring wells to better understand groundwater flow in the southwest corner of the site. The evaluation of additional sampling needs to support analysis of natural attenuation mechanisms, rates, and aquifer capacity is ongoing. The eleven wells being measured monthly include an assortment of 40 C.F.R. § 257 monitoring program wells and IEPA NPDES monitoring program wells near the southwest corner of the Fly Ash Pond System.

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 lithium to below the applicable groundwater protection standard.

An SSL for total lithium was not identified at the Fly Ash Pond System following assessment monitoring completed during the reporting period in accordance with 40 C.F.R. § 257.95. MNA activities in support of groundwater remedy selection will continue despite the absence of a lithium SSL during this reporting period.