

March 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 September 5, 2020 and March 5, 2021 at the Fly Ash Pond System at the Baldwin Energy Complex.

As stated in the March 5, 2020 Semiannual Remedy Selection Progress Report, a Corrective Measures Assessment (CMA) was completed for the Fly Ash Pond System on September 5, 2019, as required by 40 C.F.R. § 257.96, and 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.

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 in November 2020 identifying additional field data collection to be completed in 2021 to support analysis of natural attenuation mechanisms, rates, and aquifer capacity. The following activities were completed as part of this field sampling plan to better understand groundwater flow in the southwest corner of the site:

- Three (3) staff gauges were installed on September 23, 2020 for monitoring surface water elevations. These three gauges and ten (10) additional groundwater wells are being measured monthly.
- One (1) piezometer was installed southwest of well MW-391 on February 24, 2021 and will be added to the ongoing monthly groundwater elevation monitoring and evaluation.

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.

As stated in the notification dated February 16, 2021, an SSL for total lithium was identified at the Fly Ash Pond System during assessment monitoring completed in accordance with 40 C.F.R. § 257.95, consistent with related observations during previous reporting periods.

Baldwin