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MEMORANDUM

22 August 2024
File No. 0129420

TO: Southern Indiana Gas and Electric Company

FROM: Haley & Aldrich, Inc.

SUBJECT: Semiannual Remedy Selection Progress Report Pursuant to 40 CFR §257.97(a)
F.B. Culley Generating Station – West Ash Pond

The Southern Indiana Gas and Electric Company (SIGECO) initiated an assessment of corrective measures for the former West Ash Pond (WAP) at the F.B. Culley Generating Station on 30 October 2020 in response to a statistically significant level (SSL) of Appendix IV constituents exceeding Groundwater Protection Standards (GWPS). Pursuant to 40 Code of Federal Regulations (CFR) §257.96(a), a demonstration for the need of a 60-day extension for the assessment of corrective measures was certified by a qualified professional engineer. The Corrective Measures Assessment (CMA) Report was completed and placed in the facility operating record on 26 February 2021.

Following completion of the CMA, SIGECO must, as soon as feasible, select a remedy that meets the standards listed in 40 CFR §257.97(b). Pursuant to 40 CFR §257.97(a), the owner or operator of a Coal Combustion Residual (CCR) management unit that has completed a CMA for groundwater but has not selected a remedy shall prepare a semiannual report describing the progress in selecting and designing the remedy. This report summarizes activities completed during the period of 26 February 2024 through 23 August 2024. Progress in selecting a remedy is summarized below.

Summary of Actions Completed

The following actions have occurred during this reporting period:

- Completed semiannual groundwater sampling from 6 May to 3 June 2024 consistent with 40 CFR §257.95(b) and (d)(1);
- Evaluated groundwater measurements and analytical results using potentiometric surface maps, iso-concentration maps, and trend analysis to confirm the nature and extent of Appendix IV SSLs pursuant to 40 CFR § 257.95(g) has been defined where access is available, and assessment of corrective measures findings remain appropriate;
- Completed statistical testing to determine if statistically significant increases of Appendix III constituents were identified at the boundary of the Closed in Place unit and if SSLs of Appendix

IV constituents are present downgradient of the former WAP at concentrations greater than the GWPS (consistent with 40 CFR § 257.95);

- Implemented a *Work Plan for Groundwater Flow Evaluation* in May 2024, following approval of the plan by the Indiana Department of Environmental Management (IDEM), to begin monitoring groundwater variations using a network of pressure transducers; and,
- Completed a *Bedrock Characterization Work Plan* in July 2024, following IDEM's approval, to provide site-specific data to verify that bedrock beneath the former WAP represents a no-flow boundary and to confirm the vertical delineation of CCR constituents.

Planned Activities

Anticipated activities for the upcoming six months include the following:

- Continue monitoring groundwater flow through quarterly data collection from pressure transducers per the *Work Plan for Groundwater Flow Evaluation* at the former WAP to identify potential influence from adjacent groundwater pumping wells and the Ohio River. This information will be evaluated to inform the selection of remedy;
- Conduct semiannual groundwater sampling in November 2024 consistent with 40 CFR §257.95(b) and (d)(1); and,
- Statistical trend analysis of groundwater analytical results will continue as part of the selection of remedy process to identify a remedy that meets threshold criteria summarized in §257.97(b).