March 17, 2025
File No. 0133274-027

TO: AES Indiana – Petersburg Generating Station

FROM: Haley & Aldrich, Inc.

SUBJECT: Semi-Annual Remedy Selection Progress Report Pursuant to 40 CFR §257.97(a)
Petersburg Generating Station - Ash Pond System and Type III Restricted Waste Landfill

Indianapolis Power & Light Company d/b/a AES Indiana (AESI) initiated corrective measures for the Ash Pond System and Type III Restricted Waste Landfill (Landfill) at the Petersburg Generating Station (PGS) on April 15, 2019, in response to statistically significant levels (SSL) of Appendix IV constituents (lithium and molybdenum) exceeding Groundwater Protection Standards (GWPS). Pursuant to 40 CFR §257.96(a), a demonstration of the need for a 60-day extension for the assessment of corrective measures was completed on July 12, 2019. The Corrective Measures Assessment (CMA) Report was completed and placed in the facility operating record on September 13, 2019, and subsequently amended on October 11, 2019.

In accordance with the Federal CCR Rule, following completion of the CMA, AES Indiana must, as soon as feasible, select a remedy that meets the standards listed in 40 CFR §257.97(b). Pursuant to §257.97(a), the owner or operator of a Coal Combustion Residual (CCR) management unit that has completed a CMA for groundwater is required to prepare a semi-annual report describing the progress made in selecting and designing the remedy. This report documents activities completed in support of selecting and designing a remedy during the period from September 19, 2024, through March 16, 2025. A summary of the progress made in selecting a remedy is provided below.

SUMMARY OF ACTIONS COMPLETED

Ash Pond System and Landfill

The following actions have been completed during this reporting period for the Ash Pond System and the Landfill:

- Continued Assessment Monitoring: Collected groundwater samples from the CCR monitoring wells and evaluated the results of the November 2024 sampling event in support of ongoing groundwater monitoring compliance and nature and extent (N&E) evaluations. Final laboratory results were placed in the facility's CCR operating record.
- Performing the statistical analysis of the November 2024 sampling results from the CCR monitoring wells for the presence of Appendix IV constituents.
- Six (6) surface water samples were collected within the White River in August 2024. Sampling was performed in accordance with the Indiana Department of Environmental Management approved *Groundwater Nature and Extent Investigation Surface Water Sampling and Analysis Plan.*

- Initiated groundwater flow and solute transport modeling to provide additional data to support the groundwater conceptual site model (CSM).
- Began preparation of an N&E Report which will provide a comprehensive summary of data evaluation and the CSM.
- The N&E of CCR affected groundwater has been sufficiently characterized to perform updates to the previous CMA, as appropriate.
- Began developing an updated CMA report to account for supplemental information collected since 2019 which includes additional groundwater monitoring data, refinement of the CSM, and evaluation of potential corrective measures.

Ash Pond System

The following actions have been completed during this reporting period for the Ash Pond System:

- AESI continued to further establish N&E of the Appendix IV SSLs pursuant to § 257.95(g):
  - Groundwater samples were collected from sixty-six (66) N&E monitoring wells during the November 2024 semi-annual sampling event to provide supplemental groundwater data to further delineate the horizontal and vertical extent of Appendix IV constituents downgradient of the Ash Pond System;
  - Supplement and enhance the evaluation of the extent of groundwater impacts and assessment of corrective measures and support the selection of remedy; and
  - Completed a supplemental offsite N&E investigation west of the White River in October 2024.

Landfill

The following actions have been completed during this reporting period for the Landfill:

- Groundwater samples were collected from N&E monitoring wells (MW-14, MW-15B, MW-15, MW-16, MW-25) during the November 2024 semi-annual sampling event to provide supplemental groundwater data downgradient of the Landfill.
- Groundwater samples were collected from the two (2) bedrock monitoring wells (MW-1A and MW-12A) in November 2024. The wells are intended to supplement existing background well MW-1.

PLANNED ACTIVITIES

Anticipated activities which will support CMA and selection of remedy for the upcoming six months include the following (subject to change):

- Complete the statistical analysis on the November 2024 sampling results from the CCR monitoring wells for the presence of Appendix IV constituents.
- Continue Assessment Monitoring by collecting groundwater samples in May 2025 from the site monitoring well network. The groundwater data will be evaluated for statistically significant levels compared to GWPS. Any new constituents that exceed GWPS will be considered in selection of the final remedy.
- Collect supplemental groundwater data from select N&E locations to support the updated CMA remedial alternatives and demonstrate conformance with the performance standards for selection of remedy (257.97(b)).

- Evaluate the groundwater analytical data collected during the May 2025 semi-annual assessment monitoring sampling event.
- Complete the N&E Report which will provide a comprehensive summary of data evaluation and the groundwater CSM.
- Complete an update of the CMA report to account for the supplemental information collected since 2019.
- Prepare, schedule and hold a Public Meeting to discuss the results of the updated CMA in accordance with §257.96(e).
- Begin evaluating the comments and input gained during the public meeting and begin the selection of remedy evaluation process.
- Estimate quantity of Appendix IV material released as required under 40 CFR §257.95(g)(1)(ii) and place in the facility's CCR operating record.
- Provide a semi-annual progress report that summarizes AESI's progress and status regarding a selection of remedy.