

**MEMORANDUM – Operating Record (40 CFR 257.105(h)(12))**

March 25, 2024  
File No. 0133274-012

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 22, 2023, through March 24, 2024. 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:

- Completed the statistical analysis of the May 2023 sampling results from the CCR monitoring wells for the presence of Appendix IV constituents to be present at concentrations above GWPS.
- Continued Assessment Monitoring: Collected groundwater samples from the CCR monitoring wells and evaluated the results of the November 2023 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. The groundwater monitoring data for the November 2023 sampling event is being evaluated for statistically significant levels compared to GWPS. Any new constituents that exceed GWPS will be considered in the selection of the final remedy.

## Ash Pond System

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

- Notification of Completion of Closure for Ash Ponds A and A' were placed in the facility operating record in November 2023. The closure activities were completed in accordance with the CCR Closure Plan and Closure/Post-Closure Plan, and modifications approved by the Indiana Department of Environmental Management.
- AESI continued efforts to further establish N&E to support the CMA and selection of remedy:
  - Collected groundwater samples from six (6) monitoring wells (AP-9B, AP-9I, AP-10B, AP-10I, AP-11B, AP-11I) in February 2024.
- Groundwater samples were collected from the existing N&E monitoring wells during the November 2023 semi-annual sampling event to provide supplemental groundwater data to:
  - Define the horizontal and vertical extent of Appendix IV constituents along the White River;
  - Supplement and enhance the evaluation of the extent of groundwater impacts and assessment of corrective measures;
  - Inform what additional steps, if any, are necessary to fully delineate N&E of Appendix IV constituents; and
  - Support the selection of remedy.
- Completed data collection from the pressure transducers that were installed at fourteen (14) N&E monitoring well locations to collect groundwater elevation data to better understand vertical groundwater gradients and correlate White River levels to groundwater levels to support the Conceptual Site Model (CSM). Pressure transducers were downloaded on a monthly basis through October 2023.
- Performed a site reconnaissance in October 2023 at offsite properties (west of the White River) to review potential N&E sampling locations.
- Continued communications with offsite property owners to permit access to complete supplemental N&E investigation activities.

## Landfill

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

- Collected groundwater sample in February 2024 from supplemental N&E monitoring well (MW-15B) to provide additional vertical delineation of Appendix IV SSLs downgradient of the landfill.
- Groundwater samples were collected from the two (2) new background wells MW-1A and MW-12A in November 2023 and February 2024. The wells will serve 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):

- Collect supplemental soil and groundwater data from select N&E locations to further evaluate groundwater treatment technologies.
- Obtain permission from offsite property owners for access and to perform supplemental N&E investigation activities.

- Complete the statistical analysis of the November 2023 sampling event to evaluate groundwater for the presence of SSLs above GWPS downgradient of the Ash Pond System and Landfill.
- Continue Assessment Monitoring by collecting groundwater samples in May 2024 from the CCR monitoring wells. 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.
- Continue sampling N&E monitoring wells (as necessary) which will support CMA and selection of remedy.
- Begin preparation of a N&E Report which will provide a comprehensive summary of data evaluation and the groundwater SCM.
- Continue to collect groundwater samples from background monitoring wells (MW-1A and MW-12A) located upgradient of the landfill to provide a representative data set that can be used in a statistical evaluation.
- Evaluate the groundwater analytical data collected during the May 2024 semi-annual assessment monitoring sampling event that will include select N&E monitoring wells.
- Incorporate the supplemental groundwater data into the groundwater flow and solute transport model and provide additional data to support the groundwater CSM.
- Continue to perform an engineering review of the potential CMA remedial alternatives. For these reviews, emphasis will be placed on integrating recent analytical results, identifying and evaluating applicability of emerging technologies and their potential applicability to the CMA and selection of remedy process.
- Begin preparation of an updated CMA report to account for the supplemental information collected since 2019 which will include additional groundwater monitoring data, groundwater N&E investigations, conceptual site model development, geochemical and site-specific investigations, groundwater modeling updates, and potential corrective measures evaluations.
- 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.