

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

September 21, 2022  
File No. 0133274-014

TO: AES Indiana – Harding Street Generating Station

FROM: Haley & Aldrich, Inc.

SUBJECT: Semi-Annual Remedy Selection Progress Report Pursuant to 40 CFR §257.97(a)  
Harding Street Generating Station - Ash Pond System

Indianapolis Power & Light Company d/b/a AES Indiana (AESI) initiated corrective measures for the Ash Pond System at the Harding Street Generating Station (HSGS) on April 15, 2019, in response to statistically significant levels (SSL) of Appendix IV constituents (antimony, arsenic, lithium and molybdenum) exceeding Groundwater Protection Standards (GWPS). Pursuant to 40 CFR §257.96(a), a demonstration of 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 constitutes the sixth semi-annual remedy selection progress report and is comprised of activities completed during the period of March 11, 2022, through September 12, 2022. A summary of the progress made in selecting a remedy is provided below.

### SUMMARY OF ACTIONS COMPLETED

The following activities have been completed during this reporting period:

- Completed the statistical analysis of the November 2021 sampling results for the presence of Appendix IV constituents to be present at concentrations above GWPS.
- Continued Assessment Monitoring: Collected groundwater samples and evaluated the results of the May 2022 sampling event to ensure the reliability of the results. Final laboratory results were placed in the facility's CCR operating record. The groundwater monitoring data for the May 2022 sampling event is being evaluated for statistically significant levels compared to GWPS. Any new constituents that exceed GWPS will be considered in selection of the final remedy.
- Efforts to determine the off-site nature and extent (N&E) of the Appendix IV SSLs continued pursuant to § 257.95(g):

- Groundwater samples were collected in May 2022 from the nine (9) N&E nested monitoring wells that were installed off-site at the Hanson Aggregates facility (Hanson) to define the lateral extent of Appendix IV constituents;
  - AESI evaluated groundwater analytical results from the nine (9) off-site N&E nested monitoring wells and determined that two (2) additional tri-nested monitoring wells should be installed;
  - AESI developed a work plan and evaluated the need for environmental permits for the proposed installation of the two (2) additional N&E nested monitoring wells (shallow, intermediate, deep) to further establish N&E off-site at Hanson to support CMA and selection of remedy;
  - AESI provided Hanson with an update on the status of recent off-site N&E activities and recommended next steps related to additional proposed monitoring wells to verify the extent of the plume.
- Developed a work plan, prepared and obtained a Letter of Authorization from the Indiana Department of Natural Resources along with a Stormwater Drainage Permit from the City of Indianapolis for the proposed installation of three (3) supplemental on-site N&E tri-nested monitoring wells to further establish N&E on-site along the western property boundary to support CMA and selection of remedy.

The N&E groundwater analytical results will be used to supplement and enhance the evaluation of the extent of groundwater impacts, assessment of corrective measures, and selection of remedy. Groundwater characterization of the N&E monitoring wells is ongoing, as the results of each sampling event are used to inform what additional steps, if any, are necessary to fully delineate nature & extent of Appendix IV constituents.

- Assessed the current groundwater monitoring program and developed a plan to install nine (9) additional deep and up to six (6) additional intermediate monitoring wells around the perimeter of the Ash Pond System to supplement the existing CCR groundwater monitoring network.
- Updated and calibrated the groundwater flow model by incorporating data from the off-site N&E nested monitoring well locations.
- Continued preliminary closure design evaluations for hybrid close in place and closure by removal alternatives including various staging, water management and beneficial use considerations.
- Conducted a virtual meeting with the Indiana Department of Environmental Management (IDEM) to review closure alternatives presented in the CMA and to seek input and guidance on key conceptual design elements.
- Conducted a virtual meeting with the City of Indianapolis to provide a high-level overview of closure alternatives and groundwater corrective measures specifically related to the City of Indianapolis compliance and permitting/approval requirements.

## 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 of the May 2022 sampling event to evaluate groundwater for the presence of SSLs above GWPS downgradient of the Ash Pond System.
- Continue Assessment Monitoring by collect groundwater samples in November 2022 from the CCR 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.

- Continue efforts to further establish N&E on-site along the western property boundary which will support CMA and selection of remedy:
  - Install three (3) supplemental N&E tri-nested monitoring wells (shallow, intermediate, deep), to collect groundwater data to further define the horizontal and vertical extent of Appendix IV constituents detected above GWPS;
- Continue efforts to further establish N&E off-site at Hanson which will support CMA and selection of remedy:
  - Continue discussions with Hanson to finalize the proposed monitoring well installation locations;
  - Prepare and obtain a Floodplain and Development Permit from the City of Indianapolis;
  - Install two (2) supplemental N&E nested monitoring wells (shallow, intermediate, deep), to collect groundwater data to further define the horizontal and vertical extent of Appendix IV constituents detected above GWPS.
- Complete hydraulic conductivity testing on all new on-site and off-site tri-nested N&E monitoring wells to provide data to better understand aquifer characteristics and groundwater flow patterns.
- Initiate groundwater sampling activities on all new on-site and off-site tri-nested N&E monitoring wells.
- Continue sampling of N&E wells which will support CMA and selection of remedy: Evaluate the groundwater analytical data collected during the May and November 2022 semi-annual assessment monitoring sampling events.
- Install nine (9) additional deep and up to six (6) additional intermediate downgradient monitoring wells around the perimeter of the Ash Pond System to supplement the existing CCR groundwater monitoring network.
- As appropriate, refine the CSM and associated groundwater flow and solute transport model.
- Continue to perform an engineering review of the potential CMA alternatives. For these reviews, emphases will be placed on understanding and reacting to impacts of newly gathered analytical results, and on identifying and researching applicability of emerging technologies and their impacts on the CMA and selection of remedy process.
- Have a follow-up meeting with IDEM re remedy option discussion to better inform AESI re state closure implications and solid waste regulation applicability/issues.
- 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.