

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

March 10, 2022
File No. 0133274-013

TO: AES Indiana – Eagle Valley Generating Station

FROM: Haley & Aldrich, Inc.

SUBJECT: Semi-Annual Remedy Selection Progress Report Pursuant to 40 CFR §257.97(a)
Eagle Valley 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 Eagle Valley Generating Station (EVGS) on April 15, 2019, in response to statistically significant levels (SSL) of Appendix IV constituents (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 fifth semi-annual remedy selection progress report and is comprised of activities conducted during the period of September 14, 2021, through March 10, 2022. A summary of the progress 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 May 2021 sampling results for the presence of Appendix IV constituents to be present at concentrations above GWPS.
- Continued Assessment Monitoring: Evaluated the results of the November 2021 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 November 2021 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 nature and extent (N&E) of the Appendix IV SSLs continued pursuant to § 257.95(g):
 - Groundwater samples were collected from the on-site N&E nested monitoring wells in November 2021;
 - Groundwater samples were collected from the three (3) off-site nested monitoring wells in November 2021 to define the lateral extent of Appendix IV constituents;

- Based on the off-site N&E groundwater sampling data, AESI determined that groundwater concentrations above applicable GWPS underlie adjacent properties south of the EVGS. Pursuant to § 257.95(g)(2), AESI provided notification to the affected property owners related to this finding;
- Held meeting with off-site property owners to discuss findings of off-site N&E investigation and proposed supplemental activities required to complete N&E;
- Completed negotiations with adjacent property owners to gain access for the installation of four (4) new N&E nested monitoring wells to further delineate the extent of the contamination plume; and
- Submitted a Letter of Authorization request to the Indiana Department of Natural Resources for the installation of the new off-site N&E nested monitoring wells.

The 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 inform what additional steps, if any, are necessary to fully delineate the nature & extent of Appendix IV constituents. Obtained supplemental groundwater elevation data from pressure transducers installed at selected nested monitoring well locations to refine the groundwater flow and solute transport model and provide additional data to support the groundwater conceptual site model (CSM).

- Completed updating and calibrating the groundwater flow model by incorporating data from the off-site N&E nested monitoring well locations as well as aquifer properties and potentiometric data collected during the aquifer pump test.
- Submitted response to questions received from the Indiana Department of Environmental Management (IDEM) regarding the Ash Pond System Closure & Post Closure Plan (Rev 2).
- IDEM continued to review the Ash Pond System Closure / Post Closure Plan. Public comment period ended in February 2021 and IDEM is evaluating comments received. AESI submitted additional information to IDEM in December 2021.

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 November 2021 sampling event to evaluate groundwater for the presence of SSLs above GWPS downgradient of the Ash Pond System.
- Continue Assessment Monitoring by collecting groundwater samples in May 2022 from the CCR well network. The groundwater data will be evaluated for statistically significant levels compared to GWPS. Any new constituent that exceeds GWPS will be considered in selection of the final remedy.
- Continue efforts to further establish N&E south of the EVGS which will support CMA and selection of remedy:
 - Install four (4) additional off-site N&E nested monitoring wells (shallow, intermediate, deep), to collect groundwater data to define the horizontal and vertical extent of Appendix IV constituents detected above GWPS;
 - Complete hydraulic conductivity testing on new nested monitoring wells to provide data to better understand aquifer characteristics and groundwater flow patterns;

- Evaluate the groundwater analytical data collected during the May 2022 semi-annual assessment monitoring sampling event that will include all new N&E monitoring wells; and
 - Conduct meeting with adjacent property owners regarding supplemental N&E investigation activities completed to date.
- Continue to collect supplemental groundwater elevation data from the pressure transducers installed at select nested monitoring well locations to refine the groundwater flow and solute transport model and provide additional data to support the groundwater CSM.
- As appropriate, refine CSM and associated groundwater modeling.
- Continue to perform an engineering review of the three (3) potential CMA alternatives. For these reviews, emphases will be placed on understanding and reacting to impacts of newly gathered analytical results, identifying and researching applicability of emerging technologies and their impacts on the CMA and selection of remedy process.
- Continue permit applicability and risk assessment for CMA options including IDEM’s review of CCGT discharge data.
- Continue to work with IDEM to gain approval of Ash Pond System Closure Plan / Post Closure Plan. Implementation of the Closure Plan (cap system installation) would reduce infiltration of precipitation to groundwater thereby isolating the source material.
- 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.