

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

September 16, 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 sixth semi-annual remedy selection progress report and is comprised of activities conducted during the period of March 11, 2022, through September 12, 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 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 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 May 2022;

- AESI completed installation of four (4) supplemental N&E nested monitoring wells to further delineate the extent of groundwater concentrations above applicable GWPS. Two (2) of the nested monitoring wells were completed March/April 2022 and two (2) nested monitoring wells were completed July/August 2022;
- Horizontal and vertical survey coordinates were established for the newly installed nested well clusters;
- Groundwater samples were collected from five (5) off-site nested monitoring wells in May 2022 while the remaining two off-site nested monitoring wells were sampled in August/September 2022 to define the lateral extent of Appendix IV constituents;

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 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).
- Developed a work plan for the proposed installation of three (3) supplemental N&E nested monitoring wells (shallow, intermediate, deep) to further establish N&E on-site along the western property boundary two (2) additional off-site N&E nested monitoring wells (shallow, intermediate, deep), and to support CMA and selection of remedy.
- Assessed the current groundwater monitoring program and developed a plan to install one (1) additional intermediate and two (2) deep monitoring wells around Ponds A and B to supplement the existing CCR groundwater monitoring network.
- AESI began preparing a revised CPC Plan for Ponds A, B, and C. The revised CPC Plan provides updates and additional information in response to inquiries submitted by IDEM and includes updated evaluation of ash in contact with groundwater and associated removal volume for regulated CCR units (Ponds A-C).

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 collecting 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 constituent that exceeds 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:
 - Prepare and obtain a Letter of Authorization (LOA) from the Indiana Department of Natural Resources (IDNR);

- Install two (2) supplemental 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.
- Continue efforts to further establish N&E off-site south of the EVGS along the western property boundary which will support CMA and selection of remedy:
 - Complete negotiations with adjacent property owners to gain access for monitoring well installation activities;
 - Prepare and obtain a LOA from the IDNR;
 - Install two (2) 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; and
 - Evaluate the groundwater analytical data collected during the May and November 2022 semi-annual assessment monitoring sampling event that will include all new N&E monitoring wells.
- Per IDEM request, AESI will install a new tri-nested monitoring well (shallow, intermediate, deep) near the southwest corner of Pond D to supplement the existing CCR groundwater monitoring network.
- Install one (1) additional intermediate and two (2) deep monitoring wells around Ponds A and B to supplement the existing CCR groundwater monitoring network.
- Evaluate the groundwater analytical data collected during the November 2022 semi-annual assessment monitoring sampling event that will include all new N&E monitoring wells.
- 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.
- Submit the revised CPC Plan for Ponds A, B, and C and respond to IDEM questions/comments. Implementation of the CPC 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.