

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

March 12, 2021
File No. 129342

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 I Restricted Waste Landfill

Indianapolis Power & Light Company d/b/a AES Indiana (AES Indiana) initiated corrective measures for the Ash Pond System and Type I Restricted Waste 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 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.

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 to prepare a semi-annual report describing the progress in selecting and designing the remedy. This report constitutes the third semi-annual remedy selection progress report and is comprised of activities during the period of September 13, 2020 through March 11, 2021. A summary of the progress in selecting a remedy is provided below.

SUMMARY OF ACTIONS COMPLETED

The following actions have been completed during this reporting period:

- Continued Assessment Monitoring: the results of the November 2020 sampling event and any GWPS exceedances. Final laboratory results were placed in the facility’s CCR operating record. The groundwater monitoring data is being evaluated for statistically significant levels compared to GWPS. Any new parameters 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). AES Indiana installed an additional nested N&E monitoring well (MW-21) to better define the southerly lateral extent of Appendix IV constituents. Groundwater samples were collected from the existing N&E monitoring wells in November 2020 and from MW-21 in January 2021. The analytical results will be used to supplement and enhance the evaluation of the extent of groundwater impacts, assessment of corrective measures, and support selection of remedy. Groundwater characterization of the N&E monitoring wells is ongoing;

- Pressure transducers continued to be used/monitored for collection of groundwater elevations from select monitoring wells located around and within Pond A to provide additional data to support the groundwater conceptual site model (CSM);
- Groundwater samples were collected from nested piezometer PZ-1 in September and November 2020 to evaluate groundwater conditions adjacent to the discharge canal downgradient of the Ash Pond System;
- Continued implementation of the approved Indiana Department of Environmental Management (IDEM) Ash Pond System Closure Plan / Post Closure Plan that included completion of cap system installation at Pond C which reduced infiltration of precipitation to groundwater thereby isolating the source material. Pursuant to Condition B.10 of IDEM approved ash pond closure plan, partial closure certification was submitted to IDEM for Pond C and is pending their review and approval;
- Ongoing dewatering activities of Ponds A and Pond A' as allowed under the facilities NPDES permit;
- AES Indiana obtained all applicable environmental construction permits and provided IDEM with notification that construction of closure Phases I and II of the Pond A and Pond A' final cover system is anticipated to begin in March 2021. The final cover system installation will reduce infiltration of precipitation to groundwater thereby isolating the source material; and
- AES Indiana installed temporary monitoring wells MW-22, MW-23-MW-24 in October 2020. Groundwater samples were collected from these three new temporary monitoring wells in November and December 2020. This information is being used to supplement and enhance the hydrogeologic conceptual site model and support the selection of remedy.

PLANNED ACTIVITIES

Anticipated activities which will support CMA and selection of remedy for the upcoming six months include the following:

- Continue Assessment Monitoring: Collect groundwater samples in May 2021 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 finalize N&E which will support CMA and selection of remedy:
 - Install stream gauges with nested piezometers along the White River and obtain water levels to establish a potentiometric surface to further establish groundwater/surface water interaction;
 - Collect groundwater screening samples using direct push or Sonic technology along the western property boundary/White River to define the vertical and lateral extent Appendix IV constituents;
 - Install additional N&E nested monitoring wells along the White River. Collect groundwater samples to corroborate the groundwater screening results;
 - Evaluate the groundwater analytical data collected during the May 2021 semi-annual assessment monitoring sampling event that will include any new N&E monitoring wells.
- Expand the ongoing landfill characterization efforts and install as required supplemental piezometers/wells and additional borings to better define the subsurface conditions within historic subsurface mine works immediately surrounding the landfill as it relates to the alternative source investigation, CMA and selection of remedy support;

- As appropriate, refine CSM and associated groundwater modeling;
- Continue to perform an engineering review of the five (5) 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;
- Perform closure activities at Pond A and A' (dewatering activities and cap system installation) in accordance with the IDEM-approved and federal CCR Ash Pond System Closure Plan / Post Closure Plan;
- Initiate both state and federal CCR closure and post-closure compliance actions for Pond C;
- 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; and
- Provide a semi-annual progress report that summarizes AES Indiana's progress and status regarding a selection of remedy.