

**ANNUAL COAL COMBUSTION RESIDUALS SURFACE IMPOUNDMENT
INSPECTION REPORT
POWERTON STATION - METAL CLEANING BASIN
JUNE 2022**

This annual coal combustion residuals (CCR) surface impoundment inspection report has been prepared pursuant to Section 845.540(b) of Title 35 Subtitle G, Chapter I, Subchapter j - Coal Combustion Waste Surface Impoundments for Midwest Generation, LLC (MWG) at Powerton Station (Station) in Pekin, Illinois. The purpose of this project is to perform the annual inspection of the Metal Cleaning Basin (MCB) by a licensed professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The inspection includes:

- A) Review of available information regarding the status and condition of the CCR surface impoundment, including files available in the operating record (e.g., CCR surface impoundment design and construction information required by Sections 845.220(a)(1) and 845.230(d)(2)(A), previous structural stability assessments required under Section 845.450, the results of inspections by a qualified person, and results of previous annual inspections);
- B) Visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundment and appurtenant structures;
- C) Visual inspection of any hydraulic structures underlying the base of the CCR surface impoundment or passing through the dike of the CCR surface impoundment for structural integrity and continued safe and reliable operation;
- D) The annual hazard potential classification certification, (Section 845.440);
- E) The annual structural stability assessment certification, (Section 845.450);
- F) The annual safety factor assessment certification, (Section 845.460); and
- G) The inflow design flood control system plan certification (Section 845.510(c)).

1.0 SITE DESCRIPTION

The MCB (IEPA ID Number W1798010008-03) is located at Powerton Station in Pekin, Illinois situated northeast of the main power building, south of the Wastewater Building and between the Ash Surge Basin and former Cooling Water Intake Canal (see Figure 1). Measuring 450 feet long and 225 feet wide, approximately 2.3 acres in size, the MCB is lined with a 60 mil high-density polyethylene (HDPE) liner. Gravel access roads are located along the north, east, and west sides.

The MCB was constructed in the late 1970s or early 1980s, and has not undergone significant changes in the geometry. The original operation was designed to receive bottom ash and, twice a year, boiler wash via sluicing with wastewater treated in the wastewater treatment plant. Operation of the MCB has changed to also receive bottom ash and fly ash by end dumping. Wastewater is

periodically pumped from the MCB, treated to remove elevated metal concentrations, and discharged into the Ash Surge Basin. The MCB is inspected weekly by the Environmental Specialist including checking the water level in the basin.

2.0 ANNUAL INSPECTION

Civil & Environmental Consultants, Inc. (CEC) inspected the MCB on May 26, 2022. The following tasks were completed in preparing this annual inspection report:

- Reviewed the weekly and monthly inspection reports completed by a qualified person, annual hazard potential classification certification, annual structural stability assessment certification, annual safety factor assessment certification, the inflow design flood control system plan certification, and previous inspection reports prepared by a qualified professional engineer.
- Performed the annual inspection in accordance with the requirements of Section 845.540(b) including observations pertaining to the following:
 - Changes in Geometry - 845.540(b)(2)(A): changes in geometry of the impounding structure since the previous annual inspection;
 - Instrumentation - 845.540(b)(2)(B): location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection;
 - Capacity and Impounded Volume - 845.540(b)(2)(C): approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;
 - Storage Capacity - 845.540(b)(2)(D): storage capacity of the impounding structure at the time of the inspection;
 - Volume of the Impounded Water and CCR - 845.540(b)(2)(E): Estimate the approximate volume of the impounded water and CCR at the time of the inspection.
 - Structural/Operational Observations - 845.540(b)(2)(F): appearances of an actual or potential structural weakness of the CCR surface impoundment, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR surface impoundment and appurtenant structures; and
 - Other Changes 845.540(b)(2)(G): Any other changes that may have affected the stability or operation of the impounding structure since the previous annual inspection.

Results of our 2022 surface impoundment inspection report are provided in the following section.

2.1 Changes in Geometry - 845.540(b)(2)(A)

At the time of inspection, the MCB geometry was observed to be unchanged from previous inspection reports and assessments. Available online aerial photographs were also reviewed as far back as 1995 that showed no change in geometry.

2.2 Instrumentation - 845.540(b)(2)(B)

Instrumentation associated with the hydraulic structures, impoundment embankments, and/or slope performance were not observed. Since the last inspection, a water level gauge was installed.

2.3 Capacity and Impounded Volume - 845.540(b)(2)(C-E)

The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection are represented in Table 1, attached. The volume of CCR is less than reported from the 2021 annual inspection. Wastewater is periodically pumped from the MCB, treated, and discharged into the Ash Surge Basin. The MCB is inspected weekly by the environmental specialist including checking the water level in the basin.

2.4 Structural/Operational Observations - 845.540(B)(2)(F)

CEC inspected the basin for signs of distress that would have the potential to disrupt operation and safety of the MCB. The MCB is partially incised minimizing the potential of a release of CCR. Our observations showed no signs of distress which currently suggest the safety, stability, or operation of the impounding structure is compromised.

2.5 Other Changes - 845.540(B)(2)(G)

CEC inspected the MCB for signs of other changes that may have affected the stability or operation of the impounding structure since the previous annual inspection. Our inspection showed no distresses that would affect the operation and/or stability.

3.0 CONCLUSIONS

Our assessments and inspection of the MCB showed no signs of distress that would suggest the stability or operation of the impounding structure is compromised.

4.0 LIMITATIONS AND CERTIFICATION

This CCR surface impoundment inspection was prepared to meet the requirements of Section 845.540(b) and was prepared under the direction of Mr. M. Dean Jones, P.E.

By affixing my seal to this, I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Seal:



Signature: Dean Jones

Name: M. Dean Jones, P.E.

Date of Certification: June 22, 2022

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023

Table 1: Inspection Summary - Metal Cleaning Basin

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	845.540(b)(2)	None	None
Instrumentation	845.540(b)(2)	Added water gauge	None
Water Depth	845.540(b)(2)	0.9 feet, minimum 1.5 feet, at inspection 6.0 feet, maximum	None
CCR Depth	845.540(b)(2)	Less than 1 foot	None
Estimated Storage Capacity	845.540(b)(2)	17 Acre Feet	None
Impounded Water Volume	845.540(b)(2)	0.5 Acre Feet	None
Impounded CCR Volume	845.540(b)(2)	1.0 Acre Feet	None
Structural/Operational Observations	845.540(b)(2)	None	None
Other Changes	845.540(b)(2)	None	None