FINAL

ANNUAL INSPECTION REPORT

NEARMAN CREEK POWER STATION

BOTTOM ASH IMPOUNDMENT

Kansas City, Kansas

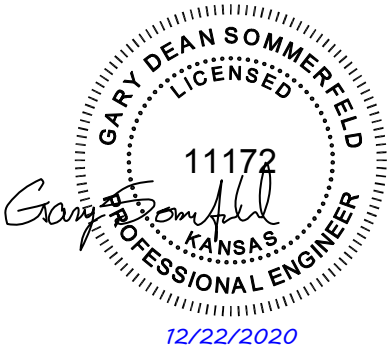
B&V PROJECT NO. 190719
B&V FILE NO. 41.0403

PREPARED FOR

KANSAS CITY BPU
THE POWER OF COMMUNITY

Kansas City Board of Public Utilities

22 DECEMBER 2020



12/22/2020

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1.0 Executive Summary

This report presents a summary of the annual inspection for the Kansas City Kansas Board of Public Utilities (KCKBPU) Nearman Creek Power Station Bottom Ash Impoundment in Kansas City, Kansas. The annual inspection was completed by Black & Veatch on December 9, 2020. The annual inspection was completed in compliance with 40 CFR § 257.83 and included review of available information regarding the impoundment area as well as a visual inspection of the current changes within the location of the impoundment.

1.1 SUMMARY OF FINDINGS

The pond area was drained of all free water and bottom ash was removed as shown on the construction drawings in the Construction Quality Control Plan (CQA Plan) and in accordance with the facilities National Pollutant Discharge Elimination System (NPDES) permit 1-MO25-BOO1. The impoundment berms and pond area have been regraded with the intent to meet the design drawings provided in the "*Bottom Ash Plan – Closure Drawings and Construction Quality Control Plan*" developed by Burns & McDonnell in June 2018. The satisfactory completion of the construction work has been presented in the Construction Quality Control Report and is not a part of this inspection.

There are no embankments that impound water or ash. There were no concerns with existing structures that may cause a release of bottom ash or water.

1.2 RECOMMENDATIONS

No additional annual inspections are necessary for this impoundment structure.

2.0 Inspection Team and Date of Inspection

2.1 INSPECTION TEAM

The inspection team consisted of one KCBPU Staff Scientist and one Black & Veatch geotechnical engineer. The inspection team members included:

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Geotechnical Engineer
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2.2 DATE OF INSPECTION

The inspection team began their work at 9:00 a.m. on Monday, December 9, 2020 and completed their work at 9:30 a.m.

2.3 WEATHER DURING INSPECTION

The weather on the day of the inspection was clear with no wind and an ambient temperature about 34° Fahrenheit. There had been no significant precipitation within the previous week.

3.0 Description of Surface Impoundment

3.1 LOCATION AND GENERAL DESCRIPTION

The KCKBPU Nearman Creek Power Station is located in Kansas City, Kansas, within Wyandotte County, in northeastern Kansas. The surface impoundment had been designed as a bottom ash settling pond and a clear water pond separated by an internal dike.

The impoundment was designed by Lutz, Daily & Brain of Shawnee Mission, Kansas. Construction was completed May 30, 1980 and was permitted by the Kansas Department of Health and Environment (KDHE) on February 11, 1982. The impoundment was constructed by building a perimeter dike consisting of on-site clay and clayey silt materials on the existing soils. Both ponds were designed with a 3-foot thick layer of impervious fill as a base.

During the previous annual inspection in 2019, the impoundments had been drained of all free water and the bottom ash was being hauled off-site. During the year 2020, the bottom ash was completely removed from the site as stated in the Bottom Ash Pond Closure Plan designed by Burns & McDonnell and dated November 2018. The work was performed in accordance with the NPDES permit. The Closure Plan included the designed regrading for the impoundment dikes and the pond area. The completion of that work has been documented in the Construction Quality Control Report. The result of the construction is that there are no embankments that retain water or bottom ash.

Figure 1 – Closure Grading for Bottom Ash Impoundment Areas

The Construction Quality Control Plan drawings show that the former impoundment embankments were used to regrade the area and facilitate surface water runoff. The riprap was reused to provide erosion protection of slopes and swales. The annual inspection observed the new grass and erosion protection fencing that was in place to provide protection for surface vegetation.

The discharge structure that has been part of the impoundment had been demolished and the surface water drainage appears to have been directed toward the low areas downstream of the discharge structure location.

Figure 2 – Previous Location of Discharge Structure

3.2 POND DIMENSIONS AND CAPACITIES

Based on the original construction drawings, the impoundment's exterior and internal dikes had a nominal crest elevation of 763 feet. The side slopes of the dikes, both interior and external were designed with 3 horizontal to 1 vertical slopes. The exterior slopes are covered with riprap on the northern portion only and grass vegetation cover on all other external slopes. The impoundment area covers approximately 21.5 acres.

The Construction Quality Control Plan drawings show the former impoundment area fill surface to slope toward the northeast corner which was the previous location of the discharge structure. The drawings indicated the fill grades range from Elevation 752 on the west to Elevation 742 at the northeast corner. Elevation measurements were not recorded for this inspection and the satisfactory completion of the construction has been provided in the Construction Quality Control Report.

The impoundment area does not retain water or bottom ash. The bottom ash removal has been documented in the Construction Quality Control Report.

Figure 3 – Graded impoundment area – From east looking northwest.

4.0 Inspection Findings

Black & Veatch completed the annual inspection based on the requirements of §257.83 of the CCR rules. The inspection was completed with the main goals of identifying signs of distress or malfunction of the impoundment embankments and hydraulic structures.

The impoundment area has been reconstructed to provide surface water runoff. There are no embankments, and there is no potential for release of coal combustion residual products or free water.

5.0 Conclusions and Recommendations

Based on the current grades at the impound area, the removal of all bottom ash and water, and the plan for no additional bottom ash or water to be contained in the former impoundment, there is no potential for accidental release of bottom ash or free liquids.

No additional annual inspections are necessary for this impoundment structure.