

**2020 ANNUAL
COAL COMBUSTION RESIDUALS (CCR)
SURFACE IMPOUNDMENT REPORT**

GRAND TOWER ENERGY CENTER

Grand Tower, Illinois

Prepared For:

GRAND TOWER ENERGY
CENTER
1820 Power Plant Rd,
Grand Tower, IL 62942

Prepared By:



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December 2020

**2020 ANNUAL
COAL COMBUSTION RESIDUALS (CCR)
SURFACE IMPOUNDMENT REPORT**

GRAND TOWER ENERGY CENTER
Inactive Ash Basin Impoundment

Grand Tower Energy Center
1820 Power Plant Rd
Grand Tower, Illinois
62942

Inspection Date: December 17, 2020

Summary

Environmental Resources Management, Inc. (ERM) has prepared this 2020 Annual Surface Impoundment Report for the previously existing coal combustion residuals (CCR) Inactive Ash Basin in accordance with the inspection requirements of 40 C.F.R. § 257.83(b) for the CCR surface impoundment at Grand Tower Energy Center. This annual CCR Surface Impoundment Inspection Report meets the requirements of 40 C.F.R. § 257.83(b)(1) and (2). This annual inspection focused primarily on the closure of the CCR Surface Impoundment. As of December 17, 2020, the CCR impoundment closure construction was substantially complete. For information purposes, the CCR Inactive Ash Basin will now be referred to as the Closed CCR Unit.

In summary, no conditions were observed during construction of the Closed CCR Unit nor identified by existing engineering analyses that represent an unsafe structural stability concern requiring immediate attention. ERM concludes that the construction, design, operation, and maintenance of the Closed CCR Unit have been sufficiently consistent with recognized and generally accepted engineering standards for protection of public safety and the environment.

Implementation of construction for the Closed CCR Unit commenced on December 10, 2019. Construction activities removed portions of the containment berm after geosynthetic LLDPE had been placed over the ash. The material from the berm was used as a protective cover layer for the cap of the Closed CCR Unit.

In accordance with 40 C.F.R. § 257.83 b) 2), the annual inspection addresses the following requirements defined in the referenced regulations:

- *Any changes in geometry of the impounding structure since the previous annual inspection* – Changes have occurred since the previous inspection. The Inactive Ash Basin is no longer in its original configuration and is now closed (Closed CCR Unit). All CCR materials within the original basin footprint have been placed under the liner system. The

basin berms were partially removed to use as final cover above the geosynthetic liner.

- *The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection* – There are no changes since the previous inspection. The basin has been closed and no longer receives discharges from the facility. Surveys document eight piezometers and 12 monitoring wells (total of 20) installed in and around the berms of the Closed CCR Unit. Two piezometers were abandoned during construction of the Closed CCR Unit leaving 18 in total.
- *The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection* – The Closed CCR Unit no longer receives discharges from the facility. The partial perimeter berms that were utilized for final cover impounds a small amount of storm water in the remaining sediment basin from the construction phase. Stormwater will be controlled during this dormant phase until the final outfall can be constructed in the spring of 2021.
- *The storage capacity of the impounded water and CCR at the time of the inspection* –The Closed CCR Unit (13 acres) is surrounded by the remnants of the original footprint (21.7 acres) of the Inactive Ash Basin. Stormwater will accumulate in the original footprint area until the final outfall is completed in the spring of 2021. Water is no longer in contact with any CCR material inside the basin.
- *The approximate volume of the impounded water and CCR at the time of the inspection* – The basin is closed and no longer receives discharges from the facility. Water present in the area surrounding the closed cell is due to precipitation, and is temporary. Ash has not been directed into the basin since about 2001. During construction of the Closed CCR Unit, additional ash was discovered, increasing the total estimated ash volume.

Approximate Volume: Ash: 675,000 cubic yards (cy) (closed under liner)
Stormwater: 0 cubic feet (basin was dry at the end of closure construction)

- *Any appearance of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures* – Closed CCR Unit is now closed and capped with geosynthetics and cover soils.
- *Any other changes which may have affected the stability or operation of the impounding structure since the previous annual inspection* – As described above, the Closed CCR Unit is now closed, and post-closure monitoring will be initiated in the spring of 2021. Annual inspections will transition to quarterly inspections during the post-closure care period.

Grand Tower Energy Center will maintain the Closed CCR Unit in a safe and regulatory-compliant manner such as meeting State and Federal laws along with company guidelines, without interruption for the duration of the post-closure care period.

*Sincerely,
ERM, Inc.*

*Chris Mettler, P.E.
Associate Engineer*

