STRUCTURAL STABILITY ASSESSMENT REVISION 1
40 C.F.R. PART 257.73
PLANT MCMANUS ASH POND 1 (AP-1)
GEORGIA POWER COMPANY

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261), §257.73(d), requires the owner or operator of an existing CCR surface impoundment to conduct initial and periodic structural stability assessments. The owner or operator must conduct an assessment of the CCR unit and document whether the design, construction, operation and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater which can be impounded therein.

The CCR surface impoundment known as Plant McManus AP-1 is located in Glynn County, just northwest of Brunswick, Georgia, on Plant McManus property. AP-1 was formed by constructing a dike across an upland marsh area north of the plant's main access road. The foundations generally consist of natural loose, fine sand and soft to medium stiff sandy clay. Laboratory strength testing of foundation soils encountered at a depth of approximately 12 feet below the crest of the embankment indicated an effective cohesion value of approximately 100 psf and an effective angle of internal friction of about 17 degrees. The foundation soils are deemed stable as indicated by stability analyses of the embankments and a satisfactory 50+ year performance history. The embankments are inspected annually by a licensed Professional Engineer and no indications of foundation instability have been noted in recent inspections.

Slope protection against surface erosion consists of grassy vegetation on the interior and exterior dike slopes. Wave action on the interior slopes is not a concern at AP-1 due to the characteristics of the impoundment. Exterior slopes performed satisfactorily with the existing grassy vegetation protection against storm surge from the 2017 Hurricane Irma event, with only localized, minimal maintenance repairs needed. AP-1 is not operated in such a manner as to normally be subjected to rapid drawdown conditions. However, historic stability analyses have been conducted for such conditions, and these analyses have indicated that the slopes are stable for rapid drawdown under current slope conditions. The vegetation present on the interior slopes would provide erosion protection against rapid drawdown.

Vegetated slopes of the dike are properly maintained to the manageable height that allows for routine visual inspections.

The pond received CCR's until the plant converted both units to burn fuel oil in the early 1970's. Process water was sent to the pond until 2017. The spillway system at Ash Pond 1 consists of a rectangular concrete channel with a "V"-notch weir installed at the midpoint. This primary discharge spillway and weir discharges via NPDES permitted outfall into Burnette Creek a tributary of the Turtle River.

The perimeter embankments have been properly constructed using mechanical stabilization and compacted to a density sufficient to withstand the range of loading conditions. The spillway is designed, constructed, operated, and maintained to adequately manage flow during and following the peak precipitation from the 1000-year flood. The pond is not subject to inundation from adjacent water bodies, apart from severe tidal surge events such as Hurricane Irma.

The Plant McManus AP-1 is in the process of being closed through removal of the CCR from the CCR unit. As of October 2019, all CCR has been removed. AP-1 was dewatered as required to facilitate excavation of ash for removal. All excavated CCR was transported and disposed of in an offsite Solid Waste permitted landfill authorized to accept CCR material. CCR removal activities are anticipated to be completed 4th Quarter 2019. The pond dike and primary spillway are intact and continue the ability to impound water. During ash pond closure, accumulated water is managed by a temporary water treatment system in accordance with a dewatering plan approved by the Georgia Environmental Protection Division. The treated water is then discharged via the NPDES permitted outfall located at the westernmost corner of AP-1. When discharged, the treated water is sampled and monitored in accordance with the approved dewatering plan.

In accordance with 40 C.F.R. 257.73(f)(3) and 40 C.F.R. 257.73(d)(2), the Structural Stability Assessment will be updated every 5 years until such time the surface impoundment has been closed and no longer meets the definition of a CCR surface impoundment as described in 40 C.F.R. 257.53.

I hereby certify that the structural stability assessment was conducted in accordance with 40 C.F.R. Part 257.73 (d).

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