

PERIODIC STRUCTURAL STABILITY ASSESSMENT (REVISION 2)
391-3-4-.10(4) AND 40 C.F.R. PART 257.73
PLANT MCMANUS ASH POND 1 (AP-1)
GEORGIA POWER COMPANY

The Federal CCR Rule and the Georgia CCR Rule (391-3-4-.10) require 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. *See* 40 C.F.R. § 257.73(d); Ga. Comp. R. & Regs. r. 391.3-4-.10(4)(b)¹. A direct final rule revision to a partial vacatur of the Final Rule became effective on October 4, 2016. This revision eliminated the exemption for inactive CCR surface impoundments and required such units to meet the same requirements as existing CCR surface impoundments. In addition, the Rules require a subsequent assessment be performed within 5 years of the previous assessment. *See* 40 C.F.R. § 257.73(f)(3); Ga. Comp. R. & Regs. r. 391.3-4-.10(4)(b)¹.

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 has undergone CCR removal in accordance with 40 C.F.R. § 257.102(c). On November 27, 2019, Georgia Power submitted a certification of removal report demonstrating completion of CCR removal activities for McManus AP-1. Based on review of the report and an inspection of AP-1 on December 13, 2019, Georgia EPD acknowledged completion of CCR removal in a letter dated January 10, 2020.

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.

^[1] In a typographical error, 391.3-4.10(4)(b) references the "structural integrity criteria in 40 CFR 247.73," when the reference to such criteria should be 40 CFR 257.73.

Slope protection against surface erosion consists of grassy vegetation and riprap 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 but protection is provided by riprap. AP-1 is not operated in such a manner as to normally be subjected to rapid drawdown conditions, but the slope protection present on the interior slopes would also provide erosion protection against rapid drawdown. Vegetated portions of the slopes of the dike are properly maintained to the manageable height that allows for routine visual inspections.

The spillway system at Ash Pond 1 consists of a rectangular concrete channel with a "V"-notch weir installed at the midpoint. This spillway system is currently being replaced with a new Parshall flume and weir gate. This primary discharge spillway and weir discharges via the 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 storm event (greater than the current inflow design flood from a 100-yr, 24-hr storm event.) The pond can be subject to inundation from adjacent water bodies but has historically performed satisfactorily even during severe tidal surge events such as hurricanes and tropical storms.

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 Georgia EPD indicates they are no longer required under their regulations.

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


James C. Pegues, P.E.
Licensed State of GA, PE No. 17419