



**PERIODIC SAFETY FACTOR ASSESSMENT
391-3-4-.10(4) AND 40 C.F.R. PART 257.73(e)
PLANT MCDONOUGH 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 a CCR surface impoundment to conduct initial and periodic safety factor assessments. See 40 C.F.R. § 257.73(e); 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. The owner or operator of the CCR unit must conduct an assessment of the CCR unit and document that the minimum safety factors outlined in 40 C.F.R. § 257.73(e)(1)(i) through (iv) for the embankment are achieved. 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 Ash Pond 1 (AP-1), owned, and operated by Georgia Power Company, is located at Plant McDonough-Atkinson (Plant McDonough) in Cobb County, Georgia. AP-1 no longer receives CCR or other waste streams and no longer functions as a CCR surface impoundment and is in the process of obtaining a solid waste permit under the Georgia Rules for Solid Waste Management, 391-3-4-.10. Installation of the final cover system for Plant McDonough AP-1 was substantially completed Q1 2017, and AP-1 is undergoing additional closure construction in the near term in accordance with 40 C.F.R. § 257.102(d), including the installation of a fully encompassing subsurface barrier wall and adjacent associated closure system upgrades.

AP-1 currently consists of 31 acres of drainage area, and stormwater is routed over the closure system through a system of downslope and perimeter channels to two outfall points: the Northwest and the South outfalls. The current conditions were evaluated for stability under four loading conditions as per 40 CFR §257.73(e):

- Storage Pool (40 C.F.R. § 257.73(e)(i))
- Surcharge Pool (40 C.F.R. § 257.73(e)(ii))
- Seismic Loading Conditions (40 C.F.R. § 257.73(e)(iii))
- Post-Seismic Liquefaction Conditions (when liquefaction susceptible materials are present; 40 C.F.R. § 257.73(e)(iv)).

Engineering analysis of AP-1 in its current condition were evaluated for each loading condition. Stability safety factors were evaluated for each of the loading scenarios using the computer program SLIDE (2018). As required by the EPA rule, a general limit equilibrium (GLE) method (Morgenstern and Price) was used to calculate factors of safety, and the factors of safety were calculated by dividing the resisting forces by the driving forces along the calculated critical slip surface of a given slope.

^[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.

