

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

The Federal CCR Rule, and, for Existing Surface Impoundments where applicable, 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. 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 Wansley AP-1 is located on Plant Wansley property in Heard and Carroll Counties in Carrollton, Georgia. The Notification of Intent to Initiate Closure was placed in the Operating Record on 04/17/2019 and closure has been designed to have no negative impacts on the stability of the perimeter embankments.

AP-1 is formed by an engineered cross-valley embankment on the northeast side of the impoundment. This embankment is also referred to as the “separator dike”, as it separates the ash pond from the Plant Wansley service water reservoir. There is also a small embankment located at the west end of the impoundment near the impoundment’s auxiliary spillway.

The foundations and abutments consist of Piedmont Physiographic Province residual soils generally consisting of stiff to very stiff silts and clays. A transitional layer of partially weathered rock is typically present between the residual soils and the underlying bedrock. The bedrock consists primarily of graphitic schist, biotite schist, schist with interlayered mafic units, amphibolite/hornblende gneiss, granitic gneiss, and feldspathic quartzite.

Slope protection against surface erosion consists of crushed stone. Wave action is not a concern at this site due to the characteristics of the impoundment and the riprap sized crushed stone used along the

^[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.

embankments. The pond is not operated in such a manner as to normally be subjected to rapid drawdown conditions. However, updated stability analyses performed for closure design have been conducted for such conditions and these analyses have indicated that a riprap buttress on the service water pond side of the separator dike is required to achieve target factor of safety for a rapid drawdown scenario. This buttress is planned for installation during closure construction.


The separator dike has been properly constructed using conventional earthwork means and methods and compacted to a density sufficient to withstand the range of loading conditions.

Stormwater is temporarily stored within the limits of the surface impoundment and discharged through a principal spillway located on the southwestern end of the pond that consists of a 42-in diameter fiberglass pipe. The 42-in pipe splits downstream into two pipes: a 36-in diameter pipe and a 10-in pipe, both of which discharge water into a detention pond on the south end of the Plant. An auxiliary spillway system consisting of a 36-in diameter CMP and a 45-ft wide concrete broad crested weir is located on the west end of the impoundment on the western embankment. The Plant currently maintains the water surface elevation of AP-1 at the historic low operating level, which is approximately 20 feet below the invert of the auxiliary spillway. There is no record of the auxiliary spillway being engaged during a storm event at the Plant.

The auxiliary discharge structure (36-inch CMP) passes through the western embankment. There is no evidence of deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect the operation of the structure.

A review of current conditions indicates the downstream slope of the Separator Dike is subject to inundation from an adjacent water body (the Plant Wansley service water reservoir). The downstream slope was constructed with a protective layer of riprap with a minimum thickness of two feet, and stability analyses have indicated that the slope is stable under steady-state conditions. Historical operational performance and inspection reports reveal no indication of slope instability associated with the downstream slope of the separator dike.

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


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