

INITIAL STRUCTURAL STABILITY ASSESSMENT
40 C.F.R. PART 257.73
PLANT WANSLEY 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 Wansley AP-1 is located in Heard and Carroll Counties in Carrollton, Georgia on Plant Wansley property. 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 of biotite gneiss and schist.

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 rip-rap sized crushed stone used along the embankment. The pond 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, and the crushed stone surfacing protects against rapid drawdown erosion.

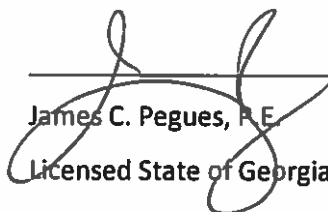
The cross-valley embankments have been properly constructed using mechanical stabilization and compacted to a density sufficient to withstand the range of loading conditions.

Stormwater is temporarily stored within the limits of the surface impoundment and discharged through a primary spillway located on the southwestern end of the pond that consists of a 42-in diameter corrugated metal pipe (CMP). The 42-in CMP splits downstream into two pipes: a 36-in diameter pipe which recycles water back to Plant Wansley, and a 10-in pipe which discharges 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 maintains the water surface elevation of AP-1 below the invert of the auxiliary spillway by the volume of water recycled back to the Plant. 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.

The downstream slope of the Separator Dike is subject to inundation from an adjacent water body (the Plant Wansley service water reservoir). The slope was constructed with a protective layer of rip-rap with a minimum thickness of two feet, and stability analyses have indicated that the slope is stable under steady-state and rapid drawdown 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. Part 257.73 (d).


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