

INITIAL STRUCTURAL STABILITY ASSESSMENT
40 C.F.R. PART 257.73
PLANT MCINTOSH 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 McIntosh AP-1 is located in Effingham County, east of Rincon, Georgia, on Plant McIntosh property. AP-1 is formed by an engineered perimeter embankment. The foundations generally consist of natural medium stiff silty, and sandy clay, medium dense to very dense silty and clayey sands, and compacted silty clay fill under portions of the embankment where the natural soils have been excavated.

Slope protection against surface erosion consists of grassy vegetation and some gravel on the interior and exterior dike slopes. Wave action is not a concern at AP-1 due to the characteristics of the impoundment (limited width of cells). 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 gravel and vegetation present on the interior slopes would provide erosion protection against rapid drawdown.

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

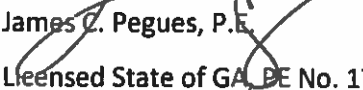
Vegetated slopes of the dike are properly maintained to the manageable height that allows for routine visual inspections.

AP-1 is subdivided into four cells, known as Cells A, B, C, and D, which are separated from each other by interior containment berms. Cells A, B, and C serve as storage cells on a rotating basis, and Cell D serves as a clear pond for the management of CCR from Plant McIntosh. The CCR is first sluiced into the active cell (Cell A, B, or C), and when the active cell reaches capacity, the CCR is removed by excavation. The decant water from Cells A, B, and C is drained to Cell D via interior concrete risers and reinforced concrete pipes passing through the interior cell berms. The decant water from Cell D is normally returned to the plant via a pumping station located near the northwest corner of Cell D. The primary spillway for AP-1 is a rectangular concrete riser located near the southwest corner of Cell D. The spillway is designed, constructed, operated, and maintained to adequately manage flow during and following the peak precipitation from the 100 year flood.

The primary discharge structure riser drains into a reinforced concrete pipe which passes through or under the embankment to south of AP-1. Recent inspections of this structure revealed that it is free of deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect the operation of the structure.

The downstream slopes of the embankment are not subject to inundation from adjacent water bodies.

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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