

**INITIAL STRUCTURAL STABILITY ASSESSMENT
PLANT GASTON ASH POND
ALABAMA 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 periodic structural stability assessments. The owner or operator must 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 located at Alabama Power Company's Plant Gaston, referred to as the Plant Gaston Ash Pond is located on Plant Gaston property, just east of Wilsonville, Alabama. The CCR surface impoundment is formed by engineered perimeter embankments on the east, north, and west sides, with the south boundary formed by a natural topographic high. The foundations generally consist of stable residual clay soils overlying limestone and shale bedrock.

Slope protection against surface erosion consists of vegetation and sections of crushed stone rip rap. Wave action is not a concern at this site due to the characteristics of the impoundment. The impoundment is mostly occupied by sections of sluiced ash and dry stacked ash, with the free water pool limited to a relatively small area at the southwestern tip of the impoundment boundary. 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. The vegetation and riprap present protect against erosion that could potentially result from rapid drawdown.

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

Vegetated slopes of the dike are properly maintained to the specified height to allow periodic inspections.

The primary spillway is constructed of a concrete riser structure leading to a concrete discharge pipe. There is no auxiliary spillway. Hydrologic and hydraulic analyses have indicated that the pond does not have sufficient spillway and storage capacity to adequately manage flow during and following the peak discharge from the PMF storm event. Overtopping of the embankment section occurs near the primary spillway structure. Plans are currently being developed to armor this section of the embankment to allow it to safely operate as an auxiliary spillway.

The primary discharge structure discharge concrete pipe passes beneath the embankment. There is no evidence to suggest the presence 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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