

**INITIAL STRUCTURAL STABILITY ASSESSMENT
PLANT BARRY 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) section §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 Barry, referred to as the Plant Barry Ash Pond, is located on Plant Barry property near Bucks, Alabama. The CCR surface impoundment is formed by an engineered perimeter embankment. The embankment foundation soils generally consist of stable organic clays overlying medium dense to dense sands. Some low inboard embankments are founded on geogrid-reinforced bottom ash.

Slope protection against surface erosion consists of grassy vegetation on both the interior and exterior dikes. Wave action is not a concern at this site due to the characteristics of the impoundment, including intermittent ash deltas which limit the size of areas of free water. The pond is not operated in such a manner as to normally be subjected to rapid drawdown conditions, but the grassy vegetation will provide protection against erosion in such an event.

The perimeter embankments have been properly constructed using mechanical stabilization, compacted to a density sufficient to withstand the range of loading conditions. Embankment soils generally consist of compacted sandy clays and silty and clayey sands.

Vegetated slopes of the dike are properly maintained to a manageable height to allow for periodic inspection.

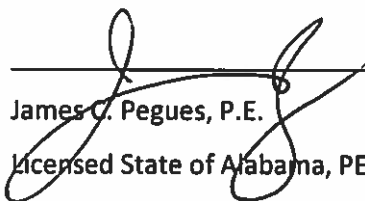
Discharge from the surface impoundment is through a four-sided concrete weir box riser structure that is connected to a nominal 48-in diameter discharge pipe. Hydrologic and hydraulic analyses have indicated that the pond does not have sufficient spillway and storage capacity to adequately manage

flow during and following the peak discharge from the 1,000-yr storm. Sections of the impoundment's south embankment are lower than the originally designed and constructed crest elevation, likely resulting from crest roadway maintenance activities. Measures are currently being planned to raise the south embankment crest back to the design elevation, which will provide the needed inflow design storm storage capacity without overtopping.

The discharge pipe passes through the south embankment of the facility. The discharge pipe was inspected via remote camera in 2015 and found to be in good condition. The pipe was subsequently lined with cementitious materials as a maintenance upgrade, and is therefore free of deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect its operation.

None of the downstream slopes of the embankment are subject to significant inundation from adjacent water bodies. The established vegetation serves well in protecting all downstream slopes.

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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