

**PERIODIC 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) and the State of Alabama's ADEM Admin. Code Chapter 335-13-15, requires the owner or operator of an existing CCR surface impoundment to conduct periodic structural stability assessments. Per §257.73(d) and ADEM Admin. Code r. 335-13-15-.04(4)(d), 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. In addition, §257.73(f)(3) and ADEM Admin. Code r. 335-13-15-.04(4)(f)3. require a subsequent assessment be performed within 5 years of the previous assessment.

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 previously sluiced ash and dry stacked ash. As the impoundment is now undergoing closure, the water surface has been lowered and there is only a limited amount of free water present, existing mainly after rain events. 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.

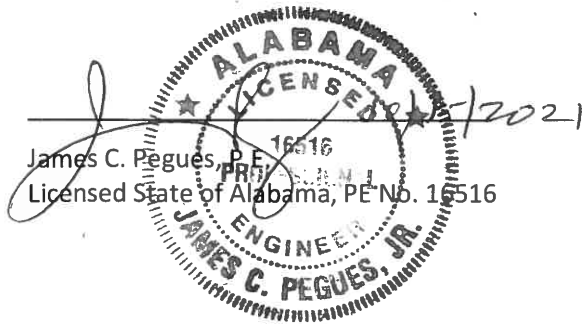
The perimeter embankments have been properly constructed using mechanical stabilization, compacted to a density sufficient to withstand the range of loading conditions.

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

An auxiliary spillway is located along the southeastern section of the impoundment embankment, near the former primary spillway. The NPDES discharge point for the plant was relocated prior to initiating impoundment closure. The original spillway and discharge pipe, which passed under the embankment, has been closed by grouting, and discharge from the pond is now pumped to a treatment system and discharged through the new NPDES discharge point. The auxiliary spillway remains in service to provide dike protection and to prevent overtopping. Hydrologic and hydraulic analyses have indicated that the pond has sufficient spillway and storage capacity to adequately manage flow during and following the peak discharge from the PMP storm event.

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. §257.73(d) and ADEM Admin. Code r. 335-13-15-.04(4)(d).

A circular professional engineer seal for the State of Alabama. The seal contains the text "ALABAMA LICENSED PROFESSIONAL ENGINEER" around the perimeter. In the center, it reads "JAMES C. PEGUES, JR." and "16516". To the right of the seal, the date "5/2021" is handwritten. A signature is written over the seal.

James C. Pegues, P.E.
Licensed State of Alabama, PE No. 16516