

**PERIODIC STRUCTURAL STABILITY ASSESSMENT  
PLANT GORGAS 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 require 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 Gorgas, also referred to as the Plant Gorgas Ash Pond, is located on Plant Gorgas property near Parrish, Walker County, Alabama. The CCR surface impoundment is formed by an engineered cross-valley embankment. The foundations and abutments generally consist of stable stiff to hard silty or sandy clays and partially weathered shale and sandstone.

Slope protection against surface erosion consists of roller compacted concrete on the upstream face and rock fill on the downstream slopes. Wave action could develop under some conditions, but the presence of the roller compacted concrete provides adequate protection against any potential wave action. 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. The roller compacted concrete is not subject to erosion in the event rapid drawdown were to occur.

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

The primary spillway (constructed in 2007) is constructed of a concrete overflow weir structure discharging to a 48-in diameter corrugated metal pipe. A second two-bay concrete spillway structure

serves as an auxiliary spillway structure. The spillways are designed, constructed operated and maintained to adequately manage flow during and following the peak discharge from the Probable Maximum Flood (PMF).

The CCR unit has a corrugated metal pipe that penetrates the embankment after it leaves the concrete overflow discharge structure. This pipe is encased in flowable fill poured neat against the embankment materials throughout the length of the embankment penetration. Recent inspections of this structure indicate there is no evidence 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. §257.73(d) and ADEM Admin. Code r. 335-13-15-.04(4)(d).

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