

**PERIODIC STRUCTURAL STABILITY ASSESSMENT  
PLANT GREENE COUNTY 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 Greene County also referred to as the Plant Greene County Ash Pond is located on Plant Greene County property near Forkland and north of Demopolis, Alabama. The CCR surface impoundment is formed by an engineered perimeter embankment. The foundations generally consist of stable, hard chalk, overlain by firm sandy clay and/or loose clayey and silty sand.

Slope protection against surface erosion consists of vegetation and riprap (where applicable). Wave action is not a concern at this site due to the characteristics of the impoundment. Due to ongoing closure activities, the impoundment has been substantially dewatered. The majority of the impoundment contains previously sluiced ash above the current pool elevation, and the pool is no deeper than 10 feet where free water is still present. The impoundment 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. Furthermore, the vegetative and riprap slope covering provides for erosion protection against rapid drawdown conditions.

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.

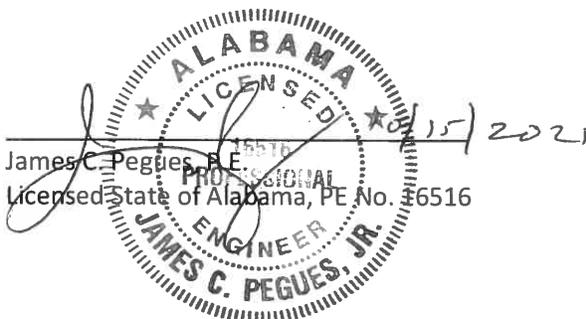
As a part of the closure activities, a new outlet works was designed and has been constructed. The primary spillway is now a square concrete riser with nominal dimensions of approximately 8 feet. The riser connects to a 36-inch diameter concrete discharge pipe that passes through the existing exterior dike. The new concrete pipe discharges to a riprap channel and into the Black Warrior River. The impoundment is designed, constructed and maintained to adequately manage flow during and following the peak discharge from the 1000-yr storm.

The new discharge structure which passes through the embankment was inspected at the time of construction to document that it is free of deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect the operation of the structure.

The south dike is subject to river flood water reaching the downstream toe and lower face. Observations during past events indicate the flood level water was static. Vegetation has been left undisturbed (trees) adjacent to the downstream toe of the south dike where practical to serve as a deterrent to erosion. The discharge channel on the south side of the dike, below the downstream toe is also subject to river levels. The area around the discharge pipe and downstream toe have been armored with riprap.

The east side of the dike, adjacent to the discharge canal/barge canal, is also subject to river levels. This area has been armored with geotextile overlain with crushed stone. The remainder of the southern dike has utilized either natural formations or soil stockpiles to form a barrier greater than 200 feet wide to protect the slope face and downstream toe.

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).

  
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