

**LOCATION RESTRICTION DEMONSTRATION
SEISMIC IMPACT ZONE (40 C.F.R. PART 257.63)
PLANT BOWEN ASH POND 1 (AP-1)
GEORGIA POWER COMPANY**

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities Final Rule" (40 C.F.R. Part 257.63), requires that existing CCR surface impoundments must not be located in seismic impact zones unless the owner/operator demonstrates that all structural components of the impoundments (including liner systems, leachate collection and removal systems, and surface water control systems) are designed to resist the maximum horizontal acceleration in lithified earth material at the site. A seismic impact zone is defined in the USEPA CCR Rule as an area having a 2 percent or greater probability that the maximum expected horizontal acceleration, expressed as a percentage of the earth's gravitational pull (g) will exceed 0.10g (or 10%g) in 50 years. This determination can be made using a seismic hazard map or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

The United States Geological Survey (USGS) Unified Hazard Tool for the Conterminous U.S. (2014) (v4.1.1) was used to calculate the estimated maximum horizontal acceleration for the vicinity of AP-1. Based on review of this data, AP-1 is in a seismic impact zone, as defined in 40 CFR 257.53, with a reported maximum horizontal acceleration in lithified earth material of 0.17g (or 17%g).

The stability of the AP-1 dikes under seismic loading was evaluated in the *Initial Safety Factor Assessment for Plant Bowen Ash Pond 1 (AP-1)* report in October 2016 using geotechnical modeling software and soil properties obtained from laboratory testing of CCR, foundation soils, and embankment fill material. A factor of safety for seismic load conditions of 1.4 was computed; this value exceeds the minimum factor of safety of 1.0 required in 40 CFR 257.73(e)(1)(iii). Based on the results of this analysis, the structural components at AP-1 were demonstrated to be stable under the maximum anticipated horizontal acceleration.

I hereby certify that for Georgia Power's Plant Bowen AP-1, the seismic impact zones location restriction demonstration meets the requirements of 40 C.F.R. Part 257.63(a).

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10/17/2018

