

**LOCATION RESTRICTION DEMONSTRATION  
UNSTABLE AREAS (40 C.F.R. PART 257.64)  
PLANT HAMMOND 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 257.64), requires that existing CCR surface impoundments must not be located in an unstable area unless recognized and generally-accepted good engineering practices have been incorporated into the design of the CCR unit to ensure that the integrity of the structural components of the CCR unit will not be disrupted. The USEPA CCR Rule defines an unstable area as "a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity, including structural components, of some or all of the CCR unit that are responsible for preventing releases from such unit." Unstable areas may include poor foundation soil conditions, areas susceptible to mass movements, and geological conditions such as karst terrains.

Soil Conditions

Based on historical borings advanced at Plant Hammond (Plant), the soil conditions in the vicinity and beneath AP-1 contain significant amounts of clay that is not susceptible to liquefaction. These materials are relatively stiff and typically comprised of clayey sand and sandy lean, to fat clay. There is no known history of issues associated with settlement or differential settlement at AP-1. Therefore, soil conditions in the vicinity and beneath AP-1 should not result in significant differential settlement.

Geologic Conditions

The USGS National Karst Map (2014), which shows locations of karst and potential karst areas in soluble rocks in the contiguous United States, identifies the area near Plant Hammond as "carbonate rocks at or near the land surface (occurring in a humid climate)". AP-1 is underlain by Conasauga Formation limestone, which is potentially affected by dissolution of the carbonate rock units. Historical boring logs indicate the presence of discontinuous solution features, but the available information does not suggest the presence of laterally continuous karst features that would create significant conduits, caverns or sinkholes with the potential to impact structural features at AP-1. Geotechnical borings advanced into the bedrock beneath the AP-1 footprint prior to construction indicate more than four feet of competent shaley limestone bedrock overlying the few discontinuous solution features (between 1 and 3 feet in size) that were observed. A review of the 7.5-minute USGS topographic maps from Rock Mountain, GA and Livingston, GA quadrangles did not indicate the presence of surface expressions of karst features, such as sinkholes, surface depressions, and sinking or disappearing streams within approximately 1 mile of the Plant.

AP-1 is situated on a relatively flat site that is not at risk from unstable natural slopes or mass movements and is not at risk of erosive undercutting by the nearby surface water bodies of Cabin Creek or the Coosa River.

Human-made Features

AP-1 and the other adjacent ponds represent human-made features that include the containment dikes and associated infrastructure (i.e., pipes, intake structures, spillway, etc.).

The *Initial Structural Stability Assessment for Plant Hammond Ash Pond 1 (AP-1) (2017)* concluded that the structural components of AP-1 are stable. There are no known features at AP-1 capable of impairing the integrity of the structural components of the unit and therefore AP-1 is not prone to disruption due to human-made features.

#### Engineering and Operational Practices

Historical engineering records at AP-1 indicate that during construction of the impoundment, excavation limits were set to maintain intact residuum and overburden soils between the bottom of the unit and the top of the underlying bedrock. The soil and bedrock conditions are not expected to contribute to unstable foundations at AP-1.

AP-1 has primarily been utilized as a secondary CCR accumulation area; no significant CCR material has been added to the impoundment, and the volume of CCR in the pond has not changed in nearly 50 years. Operational records indicate that the surface water level within AP-1 experiences minimal fluctuations, and a relatively constant elevation of approximately 585 ft MSL is maintained.

In the 65-year operational history of AP-1, there has been no record of structural instability of the impoundment, the dikes, or the foundation soils and no reporting of significant water loss from the pond that would suggest conduit flow via solution features in the bedrock. Given the stable and static conditions of the emplaced CCR material and the constant head maintained within the pond for more than six decades, recognized and generally-accepted good engineering practices have been incorporated into the design of the impoundment and under current conditions, the integrity of the structural components of the unit have not been disrupted.

I hereby certify that for Georgia Power's Plant Hammond AP-1, the unstable areas location restriction demonstration meets the requirements of 40 C.F.R. 257.64(a).



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