

INITIAL STRUCTURAL STABILITY ASSESSMENT
40 C.F.R. PART 257.73
ASH POND 3 (AP-3) AND 4 ASH POND 4 (AP-4)
PLANT MCDONOUGH, GEORGIA POWER COMPANY

The United States Environmental Protection Agency's (EPA) "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261), §257.73(d) and §257.100(e)(3)(v) requires the owner or operator of an existing CCR surface impoundment to conduct an initial and periodic structural stability assessment. The owner or operator must document whether the design, construction, operation and maintenance of the CCR unit is consistent with generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater which can be impounded therein.

CCR surface impoundments known as Ash Pond 3 (AP-3) and Ash Pond 4 (AP-4) are owned and operated by Georgia Power Company and are located at Plant McDonough-Atkinson (Plant McDonough), in Cobb County, Georgia. AP-3 and AP-4 are located in the Piedmont geologic region, characterized by igneous and metamorphic rock. In general, underlying rock at the facility consists of schist and gneiss. The depth to rock surface varies across the site, but rock is generally encountered 20 to 60 feet below ground surface.

At the time of this submittal, AP-3 and AP-4 are being consolidated and closed in place as combined unit AP-3/4 in accordance with §257.102(d).

The embankments of AP-3 and AP-4 are formed by perimeter dikes consisting of locally borrowed, compacted, residual soils. The subsurface near the perimeter berms of AP-3 and AP-4 consists of the following major layers:

- Alluvial deposits (below parts of embankment)
- Residuum soils
- Saprolite soils
- Partially weathered rock (PWR)
- Schist and Gneiss bedrock

The side-hill embankments at AP-3 and AP-4 were properly constructed and compacted to a density capable of withstanding the range of loading conditions evaluated for the interim condition.

In the interim stage of construction, water is managed through a system of three temporary detention ponds that retain stormwater during the construction process at the northwest, south, and within the AP-4 boundaries. The storage capacity of each pond is connected at certain areas. Under these conditions and along with the use of pumps during the construction process, all runoff during storm events enters the storage volume within the temporary pond in AP-4 (temporary pond B).

Embankment slopes and cover components effectively meet the requirements of §257.73(d). Downstream embankment slopes are vegetated and well maintained. Upstream embankment slopes are covered utilizing a ClosureTurf® engineered cover system, consisting of synthetic turf and sand infill, ArmorFill® infill, or HydroBinder® infill application. Downslope and perimeter channels consist of armoring with HydroBinder®, rip rap, or armored with articulated concrete block for surface water conveyance. The upstream and downstream embankment slopes are not subject to wave action or rapid drawdown.

I certify that the structural stability assessment for AP-3 and AP-4 was conducted in accordance with 40 CFR §257.73(d).



Gregory L. Hebel, PhD, P.E.
Georgia Licensed Professional Engineer No. 034749
Golder Associates Inc.