PERIODIC STRUCTURAL STABILITY ASSESSMENT
391-3-4-.10(4) AND 40 C.F.R. PART 257.73(d)
PLANT MCDONOUGH ASH POND 1 (AP-1)
GEORGIA POWER COMPANY

The Federal CCR Rule and the Georgia CCR Rule (391-3-4-.10) require the owner or operator of an existing CCR surface impoundment to conduct initial and periodic structural stability assessments. A direct final rule revision to a partial vacatur of the Final Rule became effective on October 4, 2016. This revision eliminated the exemption for inactive CCR surface impoundments and required such units to meet the same requirements as existing CCR surface impoundments. 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. *See* 40 C.F.R. § 257.73(d); Ga. Comp. R. & Regs. r. 391.3-4-.10(4)(b)[1]. In addition, the Rules require a subsequent assessment be performed within 5 years of the previous assessment. *See* 40 C.F.R. § 257.73(f)(3); Ga. Comp. R. & Regs. r. 391.3-4-.10(4)(b)[1].

The CCR surface impoundment known as Ash Pond 1 (AP-1), owned, and operated by Georgia Power Company, is located at Plant McDonough-Atkinson (Plant McDonough) in Cobb County, Georgia. AP-1 no longer receives CCR or other waste streams and no longer functions as a CCR surface impoundment and is in the process of obtaining a solid waste permit under the Georgia Rules for Solid Waste Management, 391-3-4-.10. Installation of the final cover system for Plant McDonough AP-1 was substantially completed Q1 2017, and AP-1 is undergoing additional closure construction in the near term in accordance with 40 C.F.R. §257.102(d), including the installation of a fully encompassing subsurface barrier wall and adjacent associated closure system upgrades.

AP-1 is 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 10 to 75 feet below ground surface.

The embankments of AP-1 are formed by perimeter dikes consisting of locally borrowed, compacted soils of the Piedmont Physiographic Province generally consisting of stiff to very stiff silty sands, silts and clays. The subsurface near the perimeter berms of AP-1 consists of the following major layers:

- Alluvial deposits (in select areas)
- Residuum soils
- Saprolite soils
- Partially weathered rock
- Schist and Gneiss bedrock

[1] In a typographical error, 391.3-4.10(4)(b) references the “structural integrity criteria in 40 CFR 247.73,” when the reference to such criteria should be 40 CFR 257.73.

WSP USA Inc.
5170 Peachtree Road Bldg 100 Suite 300 Atlanta, Georgia, USA 30341 T: +1 770 496-1893 | F: +1 770 934-9476

The side-hill embankments at AP-1 were properly constructed using mechanical stabilization and compacted to a density sufficient to withstand the range of loading conditions. The embankments are founded on stable foundation soils, that do not meet the definition of Unstable Areas (§257.64). Slopes and other cover components effectively meet the requirements of §257.73(d). Downstream embankment slopes are vegetated and well maintained. Slopes in areas with final cover are covered utilizing a ClosureTurf® engineered cover system, consisting of synthetic turf and sand infill, ArmorFill® infill, or HydroBinder® infill. Downslope and perimeter channels consist of HydroBinder® or rip rap armored channels for surface water conveyance. A gravel surface road is located along the crest of the dike. The upstream embankment slopes are not subject to wave action or rapid drawdown.

AP-1 was originally designed with an emergency discharge structure in the southern portion of the unit with a 36-inch diameter outlet pipe that penetrated the southern embankment dike. This structure and the outlet pipe were abandoned by a combination of removal and grouting prior to or during closure. There are no other known penetrations of the perimeter embankments of AP-1.

At the time of this submittal, surface water is discharged from the perimeter channels to an adjacent un-named tributary located to the west and south of AP-1 through a combination of two spillways: the northwestern and the southern outfalls. These spillways are capable of adequately managing the inflow from the 24-hour, 100-year storm event without overtopping the embankment of any of the system's storm channels and have adequate spillway capacity to manage the resulting outflow.

I certify that the structural stability assessment for AP-1 was conducted in accordance with 40 C.F.R. § 257.73(d).

Gregory L. Hebeler, PhD, P.E.

Georgia Licensed Professional Engineer No. 034749

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