

INITIAL STRUCTURAL STABILITY ASSESSMENT
40 C.F.R. § 257.100(f)(2)(iv) and 40 C.F.R. § 257.73(d)
PLANT HARLLEE BRANCH ASH POND C (AP-C)
GEORGIA POWER COMPANY

A rule amendment to the Federal CCR Rule became effective on November 8, 2024. See Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; Legacy CCR Surface Impoundments, 89 Fed. Reg. 38950 (“Legacy Rule”). This Legacy Rule defines the term “legacy CCR surface impoundment” and establishes regulatory requirements for units that meet the definition of a legacy CCR surface impoundment. The Legacy Rule requires the owner or operator of a legacy CCR impoundment to conduct an initial and periodic structural stability assessment of the CCR unit and 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. See 40 C.F.R. Part 257, § 257.100(f)(2)(iv) and § 257.73(d). 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).

The legacy CCR surface impoundment known as Ash Pond C (AP-C) at Georgia Power Company’s (Georgia Power) Plant Harllee Branch (Plant Branch) property is located on the northern shore of Lake Sinclair, off State Route 24 (US 441) near Milledgeville and Eatonton in Putnam County, Georgia. AP-C is impounded by an earthen dam on the west, south, and east sides and by natural ground on the north side. The dam crest elevation varies with a minimum elevation of 400 feet (ft). The maximum height of the dam is approximately 83 ft from the crest of the dam to the downstream toe at Elevation (El.) 317 ft. The upstream slope is approximately 2 Horizontal:1 Vertical (2H:1V), and the downstream slope ranges from approximately 1.6H:1V to 2H:1V.

Georgia Power submitted a CCR handling permit application to the Georgia Environmental Protection Division (GA EPD) in November 2018 in accordance with the Georgia Rules for Solid Waste Management, Chapter 391-3-4-.10 (State CCR Rule). The CCR handling permit application is currently under review by GA EPD. Georgia Power intends to close AP-C in accordance with 40 C.F.R. § 257.102(c) and corresponding State CCR Rule 391-3-4-.10(7)(b) by removing and relocating the CCR to a permitted on-site landfill and/or selling the CCR for beneficial use.

AP-C encompasses approximately 69 acres. Construction of the AP-C South Dam was completed in November 1970 by establishing a rock base partially across the cove to approximately El. 340 ft and building an earthen dam on top of the rock base. The earthen dam includes fill material from on-site borrow areas. The subsurface stratigraphy beneath the AP-C dam and abutments includes, from top to bottom, saprolite, partially weathered rock, and competent bedrock.

Since July 1971, several repairs were implemented on both the upstream and downstream slopes. In 1977, seepage was observed following increased water surface elevations within the CCR surface impoundment, and a crushed stone filter was applied over the seepage areas to mitigate veneer sloughs

on the downstream slopes of the southern and eastern dams. In 2009, the upper portion (i.e., above the bench) of the downstream slope of the southern dam and the southern portion of the downstream slope of the eastern dam were “re-faced” with riprap. No additional remedial measures were implemented.

AP-C does not currently hold ponded water. Wave action within the CCR surface impoundment is not a concern due to the operational characteristics of the impoundment. Additionally, AP-C is not operated in such a manner as to normally be subjected to rapid drawdown conditions.

Construction specifications were not available for the dam. Based on the review of available information and visual observations, the AP-C dam has been properly constructed using mechanical stabilization and compacted to a density sufficient to withstand a range of loading conditions. Inspections of the AP-C dam are conducted on a regular basis. No actual or potential structural weaknesses of the dam or abutments, nor any existing conditions that disrupt or may disrupt the operation and safety of AP-C, were documented in the recent inspection reports (i.e., 2024 and 2025).

The exposed portions of the upstream slopes and eastern and western crests and their respective downstream slopes are covered with grass. The southern crest is covered with graded aggregate base, and the exposed portion of its respective downstream slope is armored with riprap. The vegetation is properly maintained to a manageable height that allows for routine visual inspections. Documented site inspections indicate appropriate maintenance of slope vegetation.

Historically, AP-C featured a low-level discharge structure including a 42-inch (in.) diameter corrugated metal pipe (CMP) with a 48-in. diameter CMP riser structure. The 42-in. diameter CMP was decommissioned by grouting and abandoned in place. Additionally, AP-C featured a recycle structure with steel sheet piles to El. 400 ft. Similarly, the recycle structure was abandoned in place. There is no evidence of deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris following the abandonments. Presently, the auxiliary spillway, permitted under National Pollutant Discharge Elimination System Permit Number GA0026051 as Outfall Number 04, is located along the southwestern dam of the CCR surface impoundment and includes two 24-in. diameter high-density polyethylene pipes. The northern pipe is approximately 250-ft long with an upgradient invert elevation at El. 395.70 ft and a downgradient invert elevation at El. 378.54 ft. The southern pipe is approximately 250-ft long with an upgradient invert elevation at El. 395.91 ft and a downgradient invert elevation at El. 378.33 ft. There is no evidence of deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect the operation of the auxiliary spillway.

The inflow design flood is the 1,000-year flood for a significant hazard potential CCR surface impoundment (§ 257.82(a)(3)(ii)). With a maximum allowable starting water surface elevation of El. 391.9 ft, the auxiliary spillway at AP-C can adequately manage the 1,000-year, 24-hour storm event without overtopping the dam (i.e., El. 400 ft).

A review of current conditions indicates the downstream slope of the dam may be subject to inundation from the one percent annual chance flood (i.e., the 100-year storm event) of Lake Sinclair. The Federal Emergency Management Agency's base flood elevation is El. 340.8 ft, and the rock base was constructed to approximately El. 340 ft. Large rocks on the downstream slope protect the dam against potential wave action and surface erosion. Historical operational performance and inspection reports reveal no rapid drawdown for the downstream slope of AP-C and indication of associated slope instability.

I hereby certify that the structural stability assessment was conducted in accordance with 40 C.F.R. § 257.100(f)(2)(iv) and 40 C.F.R. § 257.73(d).



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