LOCATION RESTRICTION DEMONSTRATION
FAULT AREAS (40 C.F.R. 257.62 and ADEM Admin. Code r. 335-13-15-.03(3))
PLANT GASTON ASH POND
ALABAMA POWER COMPANY

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257, Subpart D) and the State of Alabama's ADEM Admin. Code Chapter 335-13-15 require the owner or operator of an existing CCR surface impoundment to make a demonstration that the facility meets certain location restrictions. Per § 257.62 and ADEM Admin. Code r. 335-13-15-.03(3), the owner or operator must demonstrate that the facility is not located within 60 meters, or 200 feet, of the outermost damage zone of a fault that has had a displacement in Holocene time; otherwise, the Owner or Operator must demonstrate that an alternative setback distance of less than 60 meters, or 200 feet, will prevent damage to the structural integrity of the CCR unit.

The CCR surface impoundment located at Alabama Power Company's Plant Gaston, also referred to as the Plant Gaston Ash Pond, is located on Plant Gaston property, near Wilsonville, Alabama. A review of available publications from the USGS and the Geological Survey of Alabama indicate the CCR unit is not located within 200 feet of the outermost damage zone of a fault that has had a displacement in Holocene time.

I hereby certify that the fault area location restriction demonstration was conducted in accordance with and meets the requirements of 40 C.F.R. Part 257.62 and ADEM Admin. Code r. 335-13-15-.03(3).

ALABAMA LICENSED 10/13/16 16516 PROFESSIONAL ENGINEER JAMES C. PEGUES, JR.

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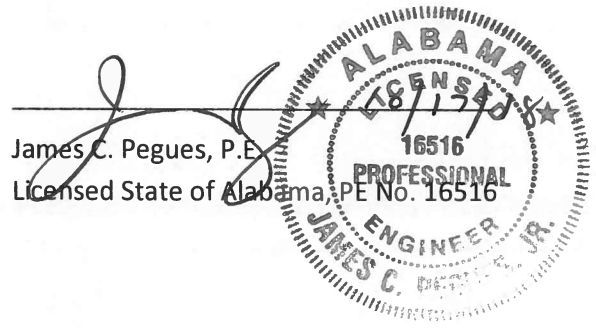
LOCATION RESTRICTION DEMONSTRATION
SEISMIC IMPACT ZONE (40 C.F.R. 257.63 and ADEM Admin. Code r. 335-13-15-.03(4))
PLANT GASTON ASH POND
ALABAMA POWER COMPANY

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257, Subpart D) and the State of Alabama ADEM Admin. Code Chapter 335-13-15 require the owner or operator of an existing CCR surface impoundment to make a demonstration that the facility meets certain location restrictions. Per § 257.63 and ADEM Admin. Code r. 335-13-15-.03(4), the owner or operator must demonstrate that the facility is not located within a seismic impact zone; otherwise, a demonstration must be made that all structural components including liners, leachate collection and removal systems and surface water control systems are designed to resist the maximum horizontal acceleration in lithified earth material for the site. A seismic impact zone is defined as an area having a 2% or greater probability that the maximum expected horizontal acceleration, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10g in 50 years.

The CCR surface impoundment located at Alabama Power Company's Plant Gaston, also referred to as the Plant Gaston Ash Pond, is located on Plant Gaston property, near Wilsonville, Alabama. The Peak Ground Acceleration for the facility location, as determined using the online USGS Unified Hazard Tool, Conterminous U.S. 2014 (v4.0.x) was determined to be 0.150. For purposes of this demonstration, we are assuming the horizontal component of the PGA exceeds 0.10g, indicating that the impoundment is in a seismic impact zone. The facility embankments were previously analyzed for seismic loading conditions, with a minimum factor of safety of 1.1 calculated, exceeding the required minimum factor of safety established by the regulations of 1.0. This analysis therefore indicates that the CCR unit meets the location restriction requirements for seismic impact zones.

I hereby certify that the seismic impact zone location restriction demonstration was conducted in accordance with and meets the requirements of 40 C.F.R. §257.63 and ADEM Admin. Code r. 335-13-15-.03(4).



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LOCATION RESTRICTION DEMONSTRATION
UNSTABLE AREAS (40 C.F.R. 257.64 and ADEM Admin. Code r. 335-13-15-.03(5))
PLANT GASTON ASH POND
ALABAMA POWER COMPANY

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257, Subpart D) and the State of Alabama's ADEM Admin. Code Chapter 335-13-15 require the owner or operator of an existing CCR surface impoundment to make a demonstration that the facility meets certain location restrictions. Per § 257.64 and ADEM Admin. Code r. 335-13-15-.03(5), the owner or operator must demonstrate that the facility is not located within an unstable area; otherwise, a demonstration must be made that 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. An unstable area is defined in the regulations 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 can include poor foundation conditions, areas susceptible to mass movements and karst terrains.

The CCR surface impoundment located at Alabama Power Company's Plant Gaston, also referred to as the Plant Gaston Ash Pond, is located on Plant Gaston property, near Wilsonville, Alabama. The CCR surface impoundment is formed by engineered perimeter embankments. The perimeter embankments have been properly constructed using mechanical stabilization and compacted to a density sufficient to withstand the range of loading conditions. Factor of safety assessments have indicated that the embankments meet the minimum factors of safety required under the rule. The foundation soils beneath the embankments and the CCR unit generally consist of stable and competent medium stiff to stiff clays and occasional medium dense clayey sands. The site and its surrounding areas are not subject to mass movements (e.g. landslides).

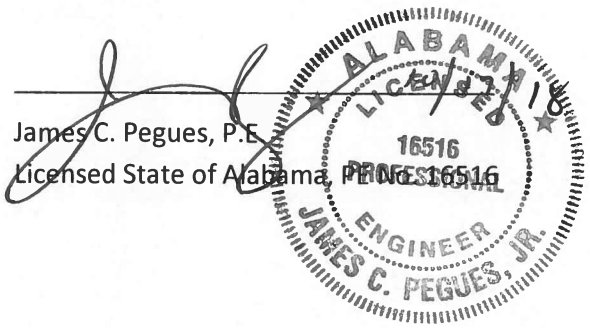
The CCR unit is located within an area known for its karst geology. As a part of pond closure planning and design studies, a combination of borings (with rock coring) and geophysical methods was used to assess karst development potential within the footprint of the CCR unit. Bedrock in karst geology can be susceptible to solutioning that can form deep slots or cavities within the rock. Generally, karst related voids that are more than about 30 feet below the top of bedrock do not affect the structural integrity of

the overlying bedrock and soil overburden, provided the bedrock over the cavity or void is solid and groundwater fluctuations are nominal. The adjacent river (Lay Lake) is maintained at a fairly constant elevation year-round; thus, as the river influences the groundwater levels below the CCR unit, they too remain fairly constant. The borings drilled within the CCR unit did not identify voids or cavities more than a few inches thick within the upper 30 feet of the bedrock. No ash was identified in the deeper voids encountered in the bedrock beneath the CCR unit. No voids were encountered in the soil overburden.

No indications of dropouts or sinkhole activity has been noted or documented in the footprint of the CCR unit since it began operation in the early 1950s. A review of historical aerial photographs from prior to construction of the CCR unit as well as historical construction records did not identify the presence of sinkholes prior to construction, and there was no reference to sinkholes or other karst-related features during initial site grading.

Based on the above information, it has been determined that the Plant Gaston Ash Pond is not located within an unstable area.

I hereby certify that the unstable area location restriction demonstration was conducted in accordance with and meets the requirements of 40 C.F.R. Part 257.64 and ADEM Admin. Code r. 335-13-15-.03(5).



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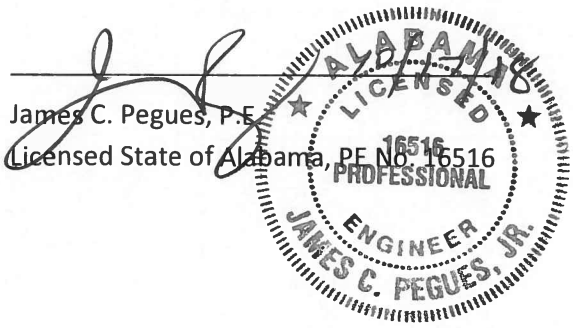
LOCATION RESTRICTION DEMONSTRATION
PLACEMENT ABOVE THE UPPERMOST AQUIFER
(40 C.F.R. 257.60 and ADEM Admin. Code r. 335-13-15-.03(1))
PLANT GASTON ASH POND
ALABAMA POWER COMPANY

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257, Subpart D) and the State of Alabama's ADEM Admin. Code Chapter 335-13-15 require the owner or operator of an existing CCR surface impoundment to make a demonstration that the facility meets certain location restrictions. Per § 257.60 and ADEM Admin. Code r. 335-13-15-.03(1), the owner or operator must demonstrate that the facility has been constructed with a base that is located no less than 1.52 meters (5 feet) above the upper limit of the uppermost aquifer, or must demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the seasonal high water table).

The CCR surface impoundment located at Alabama Power Company's Plant Gaston, also referred to as the Plant Gaston Ash Pond, is located on Plant Gaston property, near Wilsonville, Alabama. Based on a review of available groundwater data, the Ash Pond is absent the minimum 5-foot separation between the base of the CCR unit and the upper limit of the uppermost aquifer as required by 40 C.F.R. §257.60 and ADEM Admin. Code r. 335-13-15-.03(1), and therefore under current operating conditions does not meet this location restriction. Accordingly, the Ash Pond is subject to § 257.101(b)(1)(i).



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LOCATION RESTRICTION DEMONSTRATION FOR WETLANDS
PLANT GASTON ASH POND
ALABAMA POWER COMPANY

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257, Subpart D) and ADEM's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments" (ADEM Admin. Code Chapter 335-13-15) require the owner or operator of an existing CCR surface impoundment to make a demonstration that the facility meets certain location restrictions. Per §257.61 and r. 335-13-15-.03(2), the owner or operator must demonstrate that the facility is not located within a wetland; otherwise, a demonstration must be made that certain criteria are met, as outlined in §257.61(a)(1) and r. 335-13-15-.03(2)(a).

Federal regulations govern wetlands under Section 404 of the Clean Water Act (CWA) as among the set of waters included in the definition of "waters of the United States." 40 C.F.R. § 122.2. Those same regulations exclude "[w]aste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act." *Id.* & note 1. State regulations reference back to the federal program under CWA § 404. ADEM Admin. Code r. 335-13-15-.03(2).

The ash pond at Alabama Power Company's Plant Gaston is a treatment pond designed to meet the requirements of the CWA. Therefore, the ash pond is neither a wetland nor in a wetland.

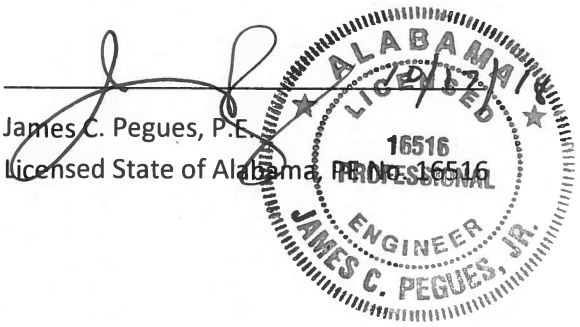
Because the ash pond is not located in a wetland, further demonstration under § 257.61(a)(1) and r. 335-13-15-.03(2)(a) is not required. Nevertheless, it has been determined that the facility does not cause or contribute to:

- A violation of any applicable state or federal water quality standard;
- A violation of any applicable toxic effluent standard or prohibition under CWA § 307;
- Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat protected under the Endangered Species Act of 1973;
- A violation of any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

To the contrary, the purpose of the pond is to facilitate compliance with the CWA and other applicable laws and regulations.

Separate documentation has demonstrated regular maintenance, inspection, and dust control practices, as well as perimeter embankments that are stable and meet all required minimum factors of safety outlined in the federal and state CCR rules. The ash pond has been designed to account for the volume of CCR and water contained in the facility. Therefore, there is no basis to find that the ash pond would cause or contribute to significant degradation of wetlands, including through erosion, stability, and migration potential of native wetland soils, muds and deposits or dredged and fill materials used to support the CCR unit; through the volume and chemical nature of the coal combustion residuals stored in the facility; through impacts to fish, wildlife or other aquatic resources or their habitat; or any other discernible factors.

I hereby certify that the wetlands location restriction demonstration was conducted in accordance with and meets the requirements of 40 C.F.R. § 257.61. and ADEM Admin. Code r. 335-13-15-.03(2).



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