

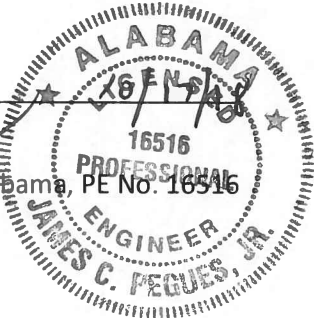
**LOCATION RESTRICTION DEMONSTRATION  
FAULT AREAS (40 C.F.R. 257.62 and ADEM Admin. Code r. 335-13-15-.03(3))  
PLANT BARRY GYPSUM STORAGE FACILITY  
ALABAMA POWER COMPANY**

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261) and the State of Alabama's ADEM Admin. Code r. 335-13-15-.03 requires 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 Barry also referred to as the Plant Barry Gypsum Storage Facility is located on Plant Barry property, near Bucks, 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).

James C. Pegues, P.E.  
Licensed State of Alabama, PE No. 16516



The seal is circular with a double-line border. The outer ring contains the text "ALABAMA" at the top and "JAMES C. PEGUES, JR." at the bottom. Inside the ring, the text "PROFESSIONAL ENGINEER" is written in a semi-circle. In the center, the license number "16516" is printed, with the date "10/11/96" written above it. Two small stars are positioned on either side of the date.

**LOCATION RESTRICTION DEMONSTRATION  
SEISMIC IMPACT ZONE (40 C.F.R. 257.63 and ADEM Admin. Code r. 335-13-15-.03(4))  
PLANT BARRY GYPSUM STORAGE FACILITY  
ALABAMA POWER COMPANY**

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261) and the State of Alabama ADEM Admin. Code r. 335-13-15-.03 requires 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 Barry also referred to as the Plant Barry Gypsum Storage Facility is located on Plant Barry property, near Bucks, 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 0.049. Therefore, the facility is not located within a seismic impact zone.

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. Part 257.63 and ADEM Admin. Code r. 335-13-15-.03(4).

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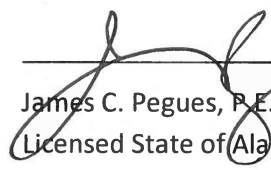


**LOCATION RESTRICTION DEMONSTRATION**  
**UNSTABLE AREAS (40 C.F.R. 257.64 and ADEM Admin. Code r. 335-13-15-.03(5))**  
**PLANT BARRY GYPSUM STORAGE FACILITY**  
**ALABAMA POWER COMPANY**

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261) and the State of Alabama's ADEM Admin. Code r. 335-13-15-.03 requires 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 CCR rule 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 Barry also referred to as the Plant Barry Gypsum Storage Facility is located on Plant Barry property, near Bucks, Alabama. The lined CCR surface impoundment is formed by an engineered perimeter embankment. 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 regulations. The Plant Barry Gypsum Pond is located on the Quaternary-age alluvial geographic area which is indicative of alluvial, coastal, and low terrace deposits consisting of very fine to coarse sands and gravelly sands with some localized instances of clay and sandy clay. Borings performed in the area surrounding the gypsum pond indicate it is founded on competent and stable silty sand, poorly-graded sand and sandy clay. The CCR unit is not located within karst terrain, and the site and its surrounding areas are not subject to mass movements (e.g. landslides).

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 BARRY GYPSUM STORAGE FACILITY  
ALABAMA POWER COMPANY**

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261) and the State of Alabama's ADEM Admin. Code r. 335-13-15-.03 requires 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 lined CCR surface impoundment located at Alabama Power Company's Plant Barry also referred to as the Plant Barry Gypsum Storage Facility is located on Plant Barry property, near Bucks, Alabama. At the time of siting and design of the facility, a series of borings were drilled and piezometers installed to establish normal and seasonal high groundwater levels. Groundwater level readings were taken over a period of several months at the site.

At the time of final design, the base of the facility was established so that it was greater than 5 feet above the measured seasonal high groundwater level, and the CCR unit was constructed in accordance with the design elevations. The highest measured groundwater level was approximately EL 3.5 feet, and the lowest base elevation of the disposal cell was EL 18 feet.

I hereby certify that the uppermost aquifer separation location restriction demonstration was conducted in accordance with and meets the requirements of 40 C.F.R. Part 257.60 and ADEM Admin. Code r. 335-13-15-.03(1).

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**LOCATION RESTRICTION DEMONSTRATION  
WETLANDS (40 C.F.R. 257.61 and ADEM Admin. Code r. 335-13-15-.03(2))  
PLANT BARRY GYPSUM STORAGE FACILITY  
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 lined CCR surface impoundment located at Alabama Power Company's Plant Barry also referred to as the Plant Barry Gypsum Storage Facility is located on Plant Barry property, near Bucks, Alabama. At the time of design of the facility, wetlands determinations were made. Any wetlands in the area were avoided and were not impacted during the construction of the facility.

Construction and operation of the facility did not and 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 section 307 of the Clean Water Act;
- 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.

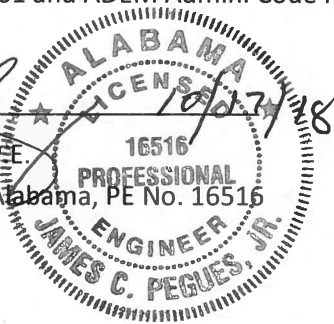
Appropriate erosion and sedimentation controls were utilized during the construction of the facility. Therefore, there was no significant degradation of wetlands due to erosion, stability and migration of native wetland soils or fill materials used to support the Gypsum Storage Area.

The volume and chemical nature of the gypsum stored in the facility has not caused or contributed to significant degradation of wetlands.

Previous analyses have indicated that the lined facility was constructed with perimeter embankments that are stable and meet all required minimum factors of safety outlined in the CCR rule. Therefore, catastrophic release of CCR from the unit has not occurred during its years of operation and is not expected, and therefore no impacts to fish, wildlife or other aquatic resources or their habitat have occurred or are expected.

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

  
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