UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

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(Sent via Electronic Mail)

Lt. Col. Edward P. Chamberlayne, Commander
Charleston District, Corps of Engineers
69A Hagood Avenue
Charleston, South Carolina 29403-5107

Attention: Richard Darden

Dear Lt. Colonel Chamberlayne:

NOAA's National Marine Fisheries Service (NMFS) reviewed public notice 2009-122-SIR, dated December 14, 2012. Duke Energy Carolinas, LLC (Duke Energy), requests authorization from the Department of the Army to dredge and place fill material in the Broad River and London Creek, Cherokee County. NMFS also reviewed the Draft Environmental Impact Statement (DEIS) for the project that was prepared by the U.S. Nuclear Regulatory Commission (NRC) in cooperation with the Charleston District and released in December 2011. The purpose of the proposed project is to construct the William States Lee III Nuclear Station; the station would be comprised of two nuclear power units and associated infrastructure. As compensatory mitigation for impacts to freshwater wetlands and streams, the applicant proposes to purchase credits from mitigation banks and conduct permittee-responsible mitigation. The Charleston District's initial determination is no essential fish habitat (EFH) or federally managed fishery species occur in the project area. NMFS agrees with this determination and offers no recommendations under the Magnuson-Stevens Fishery Conservation and Management Act. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the following comments and recommendations are provided pursuant to authorities of the Fish and Wildlife Coordination Act.

Proposed Project Description
On February 17, 2012, NMFS participated in an interagency meeting with Duke Energy and the NRC to discuss project alternatives, avoidance measures, and conceptual mitigation. The Lee Nuclear Station would be at the location previously permitted for the Cherokee Nuclear Station. While the Cherokee Station was never constructed, much of the infrastructure, such as sedimentation and drought ponds (Pond A and B, respectively), was constructed; however, more work is needed to build and operate the two nuclear power units proposed for the site. This work includes: installment and operation of intake and refill structures and discharge piping/diffusers; dredging related to the intake and refill structures; impoundment of London Creek to supplement cooling water; realignment of South Carolina Highway 329 and subsequent bridge and culverts resulting from the impoundment; reconstruction of a railroad and associated culvert improvements, and work within wetlands for two new transmission line corridors. In total, the proposed project would adversely impact 5.43 acres of freshwater wetlands, 29.63 acres of

open-water in Ninety-Nine Island Reservoir and existing impoundments, and 67,285 linear feet of stream (London Creek) to construct a second drought contingency pond (hereinafter referred to as Pond C).

Fishery and Aquatic Resources of Broad River and its Tributaries
The Broad River and its tributaries provide important riverine spawning and maturation habitats for public-trust aquatic fisheries and resources. The Broad River flows through the piedmont region, meeting the Saluda River near Columbia, SC, to form the Congaree River. Diadromous fishes of particular interest to NMFS within the Broad River include American shad, blueback herring, striped bass, American eel, Atlantic sturgeon, and shortnose sturgeon; the latter two species are listed as endangered under the Endangered Species Act. In February, April, July, and October 2006, Duke Energy sampled fish from four stations in Ninety-Nine Islands Reservoir; over 41 species of fish, including shad, were identified. State and federal fishery resource agencies are actively pursuing habitat restoration, fish passage, and recovery of migratory diadromous fish populations in the Broad River. Active research, monitoring and restoration projects are underway by resource agencies, South Carolina Electric and Gas, South Carolina Public Service Authority, Duke Energy, and conservation organizations. NMFS identifies the Broad River as a high priority for habitat restoration and recovery of diadromous fishes. While dams along the Congaree River and Broad River currently block diadromous fishes from habitat at and near the site of the proposed nuclear station, the potential for removal of these impediments to passage is high.

Potential Project Effects and NMFS Recommendations
The largest impact from the proposed project is the impoundment of London Creek and its tributaries to construct the 620-acre Pond C (22,023 acre-feet at full pond elevation of 650 ft mean sea level). When flows in the Broad River drop below 483 cubic feet per second (cfs), the Lee Station would rely on water storage in drought contingency Ponds B and C. Pond C would be tapped after the Ninety-Nine Islands reservoir and Pond B reach thresholds that would to stop further withdrawal; i.e., use of Pond C would be limited to extreme droughts. According to the DEIS, flow in the Broad River exceeds 483 cfs 95 percent of the time. Results of an analysis conducted by Duke Energy indicated that there were five events (234 days) over last past 84-year period when Pond B would not have provided the Lee Nuclear Station with enough cooling water. Although NMFS understands that avoiding the disruption of thermal stratification within the pond and keeping intake structures clear of debris is also involved in determining the volume of Pond C, the size of the pond still does not appear warranted. For example, the DEIS indicates use of a combination wet/dry hybrid cooling-tower system would reduce the water required from Pond C by 72 percent. While this would not fully eliminate the need for Pond C, it could greatly reduce the needed size of the impoundment allowing a smaller footprint at the current location, relocation to a less damaging location, or expansion of Pond B to meet the cooling water needs.

The water intake structures along the bank of the Broad River may also impact fishery resources through impingement and entrainment. In consideration of interagency goals for fish passage, habitat restoration, and recovery of shortnose sturgeon and Atlantic sturgeon in the Broad River, water intakes constructed in the reservoir should include adequate intake locations and fish screen designs to prevent entrainment and impingement of fish eggs, larvae, juveniles, and adults. During the February 12 meeting, NRC acknowledged that the intake structures are only conceptual in design at this time. NMFS recommends that design include an approach velocity no more than 0.25 feet per second and that “sweeping velocity” is maximized (i.e., the screens should be perpendicular to water inflow to the maximum extent practicable). Screen mesh size should be no more than 1 millimeter. Final designs for the intake and screening should be coordinated with NMFS to ensure adequate fish protection design criteria are incorporated.

Compensatory Mitigation
According to the applicant’s Conceptual Mitigation Plan, dated November 15, 2011, construction of the Lee Nuclear Station would require an estimated 483,583 stream credits, 54 wetland credits, and 273 open-

water credits. The applicant's mitigation plan is, at this time, conceptual and includes purchasing wetland and stream credits from mitigation banks and conducting permittee-responsible mitigation. No banks currently exist within the Upper Broad Watershed; therefore, credits would be purchased from the Sandy Fork, Grove Creek, Taylors Creek, and Turners Branch Mitigation Banks. NMFS does not object to purchasing credits from these banks; however, the applicant's proposal that creation of Pond C would mitigate the loss of open-water (page 1-9 in the Mitigation Plan) is not acceptable. Pond C would result in a significant adverse environmental impact, it is not mitigation.

During the February meeting, the applicant discussed plans to conduct permittee-responsible mitigation within the Turkey Creek tract located in Chester and York Counties and the Woods Ferry area located within the Sumter National Forest. Both sites are within the Lower Broad River watershed. The proposed plans include enhancing and restoring streams, wetland preservation, and buffer enhancement. NMFS does not object to the conceptual mitigation plan; however, the permit should not be issued until a detailed mitigation plan is approved by the resource agencies. The final plan should include a functional assessment that evaluates over time the expected benefits from the mitigation, a monitoring plan that gauges performance with respect to those benefit targets, and criteria that would trigger additional measures if the mitigation does not perform as expected.

Finally, in accordance with section 7 of the Endangered Species Act of 1973, as amended, it is the responsibility of the lead federal agency to review and identify any proposed activity that may affect endangered or threatened species and their habitat. Shortnose and Atlantic sturgeon may be present within the action area during the life of the project. Determinations involving species under NMFS jurisdiction should be reported to our Protected Resources Division at the letterhead address.

We appreciate the opportunity to provide these comments. Please direct related correspondence to the attention of Ms. Jaclyn Daly at our Charleston Area Office. She may be reached at (843) 762-8610 or by e-mail at Jaclyn.Daly@noaa.gov.

Sincerely,

Pace Willer

/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc:

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