UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

March 6, 2012

Lt. Colonel Edward P. Chamberlayne
District Engineer
Attn: Mr. Richard Darden
U.S. Army Corps of Engineers
69A Hagood Avenue
Charleston, South Carolina 29403-5107

Subject: William States Lee III Nuclear Station SAC-2009-122-SIR

Dear Lt. Colonel Chamberlayne:

This is in response to your request for comments on the above referenced joint public notice (JPN). Duke Energy Carolinas, LCC seeks to conduct dredging in the Broad River and place fill in London Creek and in tributaries and their adjacent wetlands which flow into the Broad River and London Creek at the location of the proposed William States Lee III Nuclear Station in Cherokee County, South Carolina. The proposed project will result in impacts to 5.43 acres of wetlands, 29.63 acres of open water, and 67,285 linear feet of streams. The overall project purpose, as stated by the applicant, is the development of a "nuclear baseload generating capacity."

In particular, the proposed project requires: 1) excavation, fill and temporary draining within open waters of the Ninety-Nine Islands Reservoir and existing impoundments that would result in 2.68 acres of temporary impact and 9.37 acres of permanent impact from the installation of proposed raw water system intake structures, proposed refill structures and a proposed wastewater discharge diffuser, 2) permanent impacts to 65,056 linear feet of stream, 4.07 acres of wetlands and 17.58 acres of open water farm ponds due to the construction of a drought contingency pond and associated infrastructure; of these impacts, 60,414 linear feet of stream and 3.22 acres of wetlands will be impacted due to inundation from the impoundment with the remainder of the impacts due to the construction of the dam, culverts associated with S.C. 329 and culverts associated with the railroad and placement of spoils, 3) clearing impacts to 884 linear feet of stream due to a 50-foot-wide cleared area required around the perimeter of the drought contingency pond, 4) temporary impacts to 1,345 linear feet of stream and 0.45 acres of wetland from placement of fill and flooding associated with temporary cofferdams used during the replacement of a railroad culvert, and 5) clearing impacts to 1.36 acres of forested wetlands due to the construction of the four 230-kV and 525-kV transmission lines.

The Environmental Protection Agency has reviewed the JPN and has concerns with the proposed project. A large majority of the impacts to Waters of the United States associated with the project are due to the "Drought Contingency Pond C"(Pond C). The construction of this pond will permanently impact 65,056 linear feet of London Creek and its tributaries and 4.07 acres of wetlands. These streams and wetlands are important in maintaining the physical, chemical and biological integrity of aquatic resources in the watershed. The types of streams and wetlands and the scope of the proposed impacts have led to our determination that these are Aquatic Resources of National Importance (ARNI). The aquatic impacts associated with impoundments constructed in rivers and streams are well documented in

the scientific literature and range from fragmentation of aquatic species habitat, to water quality impacts both up and downstream of an impoundment. In addition to the destruction of the riverine habitat within the impounded area, there are also adverse effects on flow regimes, velocities, temperature, dissolved oxygen, chlorophyll levels, sediment transport, nutrient cycles, etc. The following two citations contain recent studies conducted by two Southeastern states, Tennessee and North Carolina, addressing water quality impacts from impoundments: (*Probablistic Monitoring of Streams below Small Impoundments in Tennessee,*and *Selected Bibliography – Stream Impoundment Perspectives*, North Carolina Division of Water Quality, June 2008, enclosed).

The EPA has significant concerns that the effect of conversion of this stream into an impoundment could result in the elimination of existing uses of the streams in and downstream of the area of the proposed project, including the segments of the streams that could become the tailrace waters of the reservoir during and after impoundment. The conversion may also require a change in the designated uses that are currently assigned to these streams in South Carolina water quality standards. Prior to the conversion, it must be demonstrated that such a conversion complies with all aspects and requirements of South Carolina's antidegradation policy, as well as any other applicable provision of South Carolina's water quality standards regulation.

The applicant has explored many alternative sites and alternatives for cooling water sources. However, the EPA recommends further analysis of possible avoidance and minimization, as well as a more comprehensive alternatives analysis. The applicant states in the Draft Environmental Impact Statement dated December, 2011 (DEIS) that using a Combination Wet/Dry Hybrid Cooling-Tower System would reduce the water required from Pond C from 9,874 acre-feet to 2,804 acre-feet, a 72 percent reduction. While the applicant states 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 or allowing the impoundment to be relocated. Further, water sources such as offline impoundments that would eliminate or reduce impacts to Water of the United States should be explored. As the public notice for this project was issued concurrently with the DEIS, we recommend these and other alternatives be integrated into the Final Environmental Impact Statement (FEIS). The preferred alternative of a project should be the least environmentally damaging practicable alternative (LEDPA) as required by 40 CFR Part 230.10(a). As the LEDPA has not yet been established in the FEIS, we cannot fully evaluate compliance with Section 404(b)(1) Guidelines at this time.

The EPA also has some concerns with the proposed mitigation plan for the project. Information supplied by the applicant indicates that 483,583 stream compensatory mitigation credits will be required for stream impacts. In addition, 54 wetland compensatory mitigation credits and 273 open water compensatory mitigation credits will be required for wetland and open water impacts. These calculations were made using the U.S. Army Corps of Engineers Charleston District 2010 Guidelines for Preparing a Compensatory Mitigation Plan. We appreciate the applicant proposing to utilize all the available mitigation credits via mitigation banks per the 2008 Mitigation Rule in the impacted area, although this constitutes only a small portion of the stream credits needed for the proposed project. The applicant proposes to meet the remaining mitigation requirements using two permittee-responsible sites. The 2008 Mitigation Rule requires applicants to look sequentially at mitigation banks, in-lieu fee programs and permittee-responsible mitigation for required compensatory mitigation. Since the needed stream credits are unavailable through current banks and the compensatory mitigation required is extensive, one option may be to pursue the permittee-responsible mitigation plan as a single-user mitigation bank. In considering whether permittee-responsible mitigation would be appropriate, the 2008 Mitigation Rule requires that a watershed approach be used in determining where mitigation would best serve the entire impacted watershed. If permittee-responsible mitigation is found to be acceptable, a mitigation plan

must include objectives, a site protection instrument, baseline data collection plan for biotic communities, hydrology, etc., determinations of credits, a mitigation work plan, a maintenance plan, performance standards, monitoring requirements, a long-term management plan, an adaptive management plan and financial assurances. Thus, a permittee-responsible project must attain the same standard as a mitigation bank. By exploring project mitigation as a mitigation bank, the applicant can work with the Interagency Review Team to address issues and concerns and to meet the requirements of the 2008 Mitigation Rule.

The current mitigation plan lacks sufficient detail to determine if it is adequate to supply the needed mitigation and if restoration would be successful. Objectives stating which specific functions will be restored should be provided, as well as including performance standards to measure if there is functional lift versus only measuring structural standards. Further, the documentation on long-term management, adaptive management and financial assurances is inadequate. The Turkey Creek site proposes a preponderance of preservation credit. This site should be evaluated for potential restoration as preservation must meet the following criteria in order to be considered:

1. Resources provide important physical, chemical, or biological functions for the watershed;
2. Resources contribute significantly to the ecological sustainability of the watershed;
3. Resources are under threat of destruction or adverse modifications; and
4. Shall be done in conjunction with aquatic resource restoration or enhancement activities, or, if stand alone, only where resources have been identified as a high priority resource using a watershed approach and with higher compensation ratios.

Currently, a mid-March, 2012 site visit to the proposed mitigation sites is planned. The EPA will use this site visit as an opportunity to ask additional questions, discuss concerns and make requests for information needed to conduct our review at that time.

In summary, the EPA believes an adequate review of avoidance and minimization, alternatives analysis and an adequate compensatory mitigation plan have not been supplied. Based on the above observations, the EPA has determined that the project, as currently proposed, does not comply with the Section 404(b)(1) Guidelines and may have substantial and unacceptable adverse impacts on ARNIs. Therefore, we recommend denial of the project, as currently proposed. This letter follows the field-level procedures outlined in the August 1992 Memorandum of Agreement between the EPA and the Department of the Army, Part IV, paragraph 3(a) regarding Section 404(q) of the Clean Water Act.

Thank you for considering these comments in your permit review and issuance process. We look forward to continuing to work with your office and the applicant to resolve these issues. If you have any questions, please contact Kelly Laycock at laycock.kelly@epa.gov or 404-562-9132 for more information.

Sincerely,

James D. Giattina
Director
Water Protection Division

Enclosures

cc: Mr. Richard Darden, USACE
Mr. Mark Leao, USFWS
Mr. Pace Wilber, NMFS
Mr. Bob Perry, SC DNR
Ms. Susan Davis, SC DNR
Ms. Vivianne Vejdani, SC DNR
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