April 17, 2008

Mr. James Scarola
Senior Vice President
and Chief Nuclear Officer
Progress Energy, Inc.
P.O. Box 1551
Raleigh, NC 27602

SUBJECT: ACCEPTANCE REVIEW FOR THE SHEARON HARRIS NUCLEAR POWER PLANT UNITS 2 AND 3 COMBINED LICENSE APPLICATION

Dear Mr. Scarola:

By letter dated February 18, 2008, as supplemented by a letter dated February 18, 2008, Progress Energy Carolina, Inc. (PEC) submitted its application to the U.S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advanced passive pressurized water reactors in accordance with the requirement contained in 10 CFR Part 52, "Licenses, Certifications and Approvals for Nuclear Power Plants." This letter informs you that the NRC staff completed its acceptance review and has determined that your application is acceptable for docketing. These reactors will be identified as Shearon Harris Units 2 and 3 (HAR 2 and 3), and are to be located near the town of New Hill, in Wake County, North Carolina. The dockets numbers established for HAR 2 and 3 are 52-022, and 52-023, respectively.

As stated in the March 11, 2008 letter, which acknowledged receipt of the Shearon Harris application, the staff intends to publish a schedule for review of the HAR 2 and 3 combined license application (COLA) within 30 days of completing the acceptance review. The staff expects to interact with you as this schedule is developed and has identified three areas that have introduced uncertainty into the review schedule. These areas are 1) incomplete recirculation screen design in the referenced design, 2) transportation impact analysis needed to support the evaluation of construction and operational road impacts of reconstructed roads, and 3) environmental impacts at the proposed intake location of the water makeup source cannot be assessed due to the lack of sampling for aquatic species. The first issue is discussed below, the latter two issues are discussed in Enclosure 1 to this letter.

The Harris COLA incorporates by reference Appendix D to 10 CFR Part 52 and the AP1000 Design Control Document (DCD) submitted by Westinghouse as Revision 16. As allowed by 10 CFR 52.55 (c), at your own risk, you have referenced a design certification application that has been docketed but not granted. By separate letter to Westinghouse dated January 18, 2008, the staff has accepted DCD Revision 16 for docketing (ADAMS Accession No. ML073600743). The January 18, 2008, letter to Westinghouse discusses a concern with an incomplete recirculation screen design that will ultimately affect the Bellefonte reference COL (R-COL) application; and consequently the Harris subsequent COL (S-COLA).

As an S-COL applicant referencing the AP1000 certified design, and utilizing the standard content contained and designated as such in the Tennessee Valley Authority's Bellefonte Unit 2 and 3 application, it is incumbent upon PEC to remain cognizant of the resolution of the standard technical issues that will be addressed during the NRC review of the Bellefonte R-COL application. If you determine that it is necessary to resolve a standard issue differently for the Shearon Harris COL application, you must notify the NRC immediately so that we may determine the review impact of this standard issue being considered as site specific.

Enclosure 2 is a notice of acceptance for docketing. This notice is being forwarded to the Office of the Federal Register, and a separate notice will be published in accordance with the provisions of 10 CFR 2.104, regarding the opportunity to file a petition for leave to intervene in the hearing required for this application.

Should you have any questions, please contact me at (301) 415-2956 or send an e-mail to Serita.Sanders@nrc.gov.

Sincerely,

/RA/

Serita Sanders, Lead Project Manager
AP1000 Projects Branch 2
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-022
52-023

Enclosures:
1. Schedule Issues for the COL Review
2. Federal Register Notice

cc w/encl: See next page

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SCHEDULE ISSUES FOR THE SHEARON HARRIS UNITS 2 AND 3 COMBINED LICENSE REVIEW

The U.S. Nuclear Regulatory Commission (NRC) staff has identified two areas that have introduced uncertainty into the staff's development of a review schedule. These areas are described in more detail below. The staff believes that a meeting is needed to discuss these issues so that a schedule can be developed.

1) Progress Energy (PEC) has proposed an increase in the level of the Harris Reservoir by approximately 20 feet. In doing so, roads will have to be reconstructed. As stated in Subsection 4.4.2.8.3 of the Environmental Report (ER):

   > "Some roads in the Harris Reservoir area will have to be reconstructed to accommodate the increased water level. It is anticipated that, to accommodate the increased water level, the roads will be elevated in place. Local traffic on these roads would be disrupted while the modifications are implemented. Temporary detours and traffic control flaggers would be used, as appropriate, to maintain traffic flow during road modifications. Therefore, any disruptions to local traffic resulting from road modification to accommodate the new Harris Reservoir water level would be small and temporary."

   Section 4.4.2.8.1 of the ER states that a Transportation Impact Analysis (TIA) would be completed by PEC in cooperation with the North Carolina Department of Transportation to evaluate construction and operational road impacts. This TIA would evaluate a temporary access road at the intersection of U.S. Highway 1 and Shearon Harris Road as well as the relocation and reconstruction of roads due to raising the level of the Harris Reservoir, such as a section of the New Hill Holleman Road. However, the required TIA has not been completed.

   Additionally, Section 4.4.2 of the Environmental Standard Review Plan (ESRP), requires information about highways and transportation that covers modifications affecting traffic flow to and from the station site. While the ER discusses these impacts, the NRC staff cannot independently verify whether the stated small impacts are valid without a completed TIA. To date, the timeframe in which the subject TIA will be completed is unknown.

   Until a schedule for completion of the TIA can be provided to the NRC staff, the schedule for completion of the Environmental Impact Statement cannot be fully assessed.

Enclosure 1

2) The Cape Fear River, at a location upstream of the Buckhorn Dam, has been designated as the water makeup source to the Harris Reservoir. An intake pumphouse structure would be built on the river shoreline along with a pipeline delivering the river water to the Harris Reservoir. A channel out to the middle of the Cape Fear River would be dredged and protected with an underwater structure/pad to provide an adequate pool of river water for the intake pumps. The ER cites data from the Cape Fear Power Plant (a coal-fired electrical generating station owned by PEC located approximately five miles upstream from the Buckhorn Dam) for assumptions of biological susceptibility for the new intake structures. However, with the distance separating the Cape Fear Power Plant and the Buckhorn Dam, this data may not be representative of the environment in and around the proposed intake structure. Thus, the NRC staff cannot assess the environmental impacts at the proposed intake location due to the lack of sampling for aquatic species in the vicinity of the intake pumphouse and dredge area.

   Aquatic species should be determined by way of an adequate aquatic monitoring program established in accordance with ESRP Sections 2.4.2, 4.3.2, 5.3.1.2, and 6.5.2, and Regulatory Guide 4.2, Part B, Section 6. To assess the impacts to the Cape Fear River, proper data from surveys (for fish, macroinvertebrates, bivalves, invertebrates, and submerged aquatic vegetation (e.g., aquatic macrophytes)) is needed from the vicinity of the construction/dredging activities next to the Buckhorn Dam and the intake location. Due to the time necessary to conduct such surveys to properly capture seasonal variations, it is not clear whether the necessary work would be completed by the end of the anticipated timeframe for request for additional information (RAIs). Therefore, a schedule for completion of an Environmental Impact Statement cannot be fully assessed until PEC provides a schedule for conducting the biological surveys.