

August 27, 2010

Mr. John Elnitsky  
Vice President, Nuclear Plant Development  
Progress Energy Carolinas, Inc.  
P.O. Box 14042  
Saint Petersburg, FL 33733

SUBJECT: STATUS OF THE ENVIRONMENTAL REVIEW FOR SHEARON HARRIS  
NUCLEAR POWER PLANT, UNITS 2 AND 3, COMBINED LICENSE  
APPLICATION

Dear Mr. Elnitsky:

The purpose of this letter is to inform Progress Energy Carolinas, Inc. (PEC) of the current status of the U.S. Nuclear Regulatory Commission (NRC) environmental review of the combined license (COL) application for the Shearon Harris Nuclear Power Plant (HAR), Units 2 and 3. This letter is, in part, a response to the PEC letter dated March 5, 2010 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML100710419). In this letter, you state that PEC continues to place a high priority on a timely review of the HAR COL application and requests the NRC to continue diligent review of the HAR COL application. For the NRC to establish a revised environmental review schedule, the staff needs a clear path to resolve open issues identified to date in its environmental review.

The NRC staff, working in cooperation with the U.S. Army Corps of Engineers (USACE), has identified several issues during its environmental review that remain unresolved. Enclosure 1 identifies the issues the NRC considers either unresolved or that require additional coordination or cooperation with other Federal agencies or the State of North Carolina and outlines the steps necessary for resolution. The NRC staff will schedule the public meetings to be held in late August and September 2010 to review the open items with PEC, USACE, and appropriate State agencies along with discussing the steps necessary to resolve the issues.

For actions involving USACE, the NRC will coordinate with Mr. Monte Matthews, USACE Wilmington District's Raleigh Regulatory Office (919-554-4884, ext. 30, or [monte.k.matthews@usace.army.mil](mailto:monte.k.matthews@usace.army.mil)).

J. Elnitsky

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The NRC looks forward to working with PEC to resolve these remaining issues and in reestablishing the HAR environmental review schedule. If you have any questions or comments regarding this matter, please contact me at 301-415-3803, or via e-mail to [donald.palmrose@nrc.gov](mailto:donald.palmrose@nrc.gov).

Sincerely,

**/RA/**

Donald Palmrose, PhD  
Senior Project Manager  
Environmental Projects Branch 3  
Division of Site and Environmental Reviews  
Office of New Reactors

Docket Nos.: 52-022 and 52-023

Enclosure:  
As Stated

cc: See next page

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The NRC looks forward to working with PEC to resolve these remaining issues and in re-establishing the Harris environmental review schedule. If you have any questions or comments regarding this matter, please contact me at 301-415-3803, or via e-mail to [Donald.Palmrose@nrc.gov](mailto:Donald.Palmrose@nrc.gov).

Sincerely,

**/RA/**

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NRO-002

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UNITED STATES NUCLEAR REGULATORY COMMISSION

PROGRESS ENERGY CAROLINAS, INC.

OPEN ISSUES FOR THE ENVIRONMENTAL REVIEW

OF THE COMBINED LICENSE APPLICATION FOR

THE SHEARON HARRIS NUCLEAR POWER PLANT, UNITS 2 AND 3

DOCKET NOS. 52-022 AND 52-023

The U.S. Nuclear Regulatory Commission (NRC) staff considers the following items as open issues:

1. Tritium Concentration in Harris Reservoir

On December 3, 2009 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML093421268), the NRC staff received Progress Energy Carolinas, Inc.'s (PEC's) response to a request for additional information (RAI) concerning long-term tritium concentration in Harris Reservoir (also known as Harris Lake) and related estimated public dose. Based on the NRC staff's evaluation to date, the staff has questions concerning the methods and results of the hydrology analysis that were used to estimate the tritium concentration in the Harris Reservoir. By a letter dated August 20, 2010, the NRC staff sent supplement RAIs requesting PEC provide clarification on the hydrological modeling in the analysis (ADAMS Accession No. 102210136).

Actions needed: The NRC staff proposes to schedule a public meeting as soon as practicable after issuing the supplemental RAIs to review with the PEC staff the technical information needed in the response to the RAIs. The NRC staff may schedule another public meeting for a date shortly after PEC transmittal to the NRC of the supplemental response so that the PEC staff can provide any necessary clarification.

2. Consultations under Section 106 of the National Historic Preservation Act

In accordance with Title 36 of the *Code of Federal Regulations* (36 CFR) 800.8(c), the NRC staff is using the National Environmental Policy Act (NEPA) process to comply with the obligations imposed under Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), particularly to complete consultation with the State Historic Preservation Office (SHPO). This consultation is normally completed once the applicant finishes all necessary archaeological and historic surveys (known as Phases I, II, and III, if Phase III is determined to be necessary). The resulting survey correspondence between the applicant and the SHPO would then be documented in the draft environmental impact statement (EIS) required by NEPA to show that the consultation under Section 106 of the NHPA was completed.

As part of the combined license (COL) application to the NRC, PEC set an Area of Potential Effect (APE) to be the land potentially affected by raising the water level in Harris Reservoir to 240 feet mean sea level. Raising the reservoir to this level would

inundate several thousand acres of surrounding land and would damage any archaeological and historical properties that remain on these same lands. While this proposed action is related to supporting the future operation of the Shearon Harris Nuclear Power Plant (HAR), Units 2 and 3, it would require a permit from the U.S. Army Corps of Engineers (USACE) before raising the water level in Harris Reservoir. PEC would submit the appropriate permit application to USACE at a later date of its choosing to support raising the water level in Harris Reservoir.

To date, PEC has performed a Phase I survey within the APE and submitted, by letter dated June 5, 2009, a final management summary report for the Phase I survey to the SHPO (ADAMS Accession No. ML091700186). However, PEC also recognized that a full report of the Phase I archaeological survey must be submitted to the SHPO in order to complete this phase of the NHPA consultation. In particular, the PEC letter stated the following:

If we [PEC] continue forward with the overall project, the Phase I results will be reported in detail in a combined Phase II/III archaeological report. If Progress Energy chooses to abandon or indefinitely delay the proposed expansion, we will complete the Phase I report. Progress Energy will keep you updated on our proposed schedule for the remaining compliance tasks.

PEC also stated that it would notify and consult with the SHPO, as needed, conducting “all work in consultation and compliance with the North Carolina Office of State Archaeology, in keeping with the Department of Interior standards.” It is the understanding of the NRC staff that PEC has not made a final decision on whether to proceed with the Harris Reservoir expansion. PEC has not made its timing for deciding on the expansion, submitting the finalized Phase I report, and completing the Phase II surveys known to the NRC or USACE as of the date of this letter. The remaining surveys could potentially occur after the issuance of a final EIS.

The NRC would require the completion of all actions necessary to satisfy the requirement for consultation with the SHPO under the NHPA. This may mean that PEC would need to sign a memorandum of agreement (MOA) with the SHPO, USACE, and the NRC before the issuance of a final EIS which addresses surveying and protection of archaeological and historical properties within the APE. Additionally, the USACE may also need an MOA in place prior to its issuance of a record of decision on a permit application.

Actions needed: PEC needs to meet with the NRC, USACE, and the SHPO to discuss how best to ensure the completion of archaeological surveys within the APE (e.g., develop an MOA). The NRC staff will schedule a public meeting to provide the forum for this discussion.

3. Consistency between Alternative Analyses Provided for the NRC’s Environmental Review and to USACE

The NRC’s and USACE’s respective environmental review processes have their own unique requirements for the required alternative site analysis. The NRC staff has reviewed the Section 404(b)(1) alternatives analysis provided by PEC to USACE and does not require any additional information from PEC at this time. However, once PEC

resolves the latest USACE comments on the Section 404(b)(1) alternatives analysis, the NRC staff may need additional time to review and consider how the responses provided to USACE may affect the NRC environmental review.

Actions needed: PEC will coordinate with USACE and necessary State agencies to resolve USACE comments on the Section 404(b)(1) alternatives analysis and keep the NRC Environmental Project Manager, Dr. Donald Palmrose, informed of its progress and of the date it will submit a response to the NRC and USACE.

#### 4. General Conformity Determination

Based on prior responses to NRC RAIs (ADAMS Accession Nos. ML090750402 and ML091330563), the NRC has established that a conformity determination under 40 CFR Part 93, Subpart B, "Determining Conformity of General Federal Actions to State or Federal Implementation Plans," is applicable with regard to the proposed building of the HAR units. Namely, the total direct and indirect emissions of the criteria pollutant or precursor in a maintenance area caused by a Federal action would equal or exceed any of the rates in 40 CFR 93.153(b)(2).

From subsequent discussions concerning the most recent air emission analysis provided by PEC (ADAMS Accession No. ML091950669), the State of North Carolina's Department of Environment and Natural Resources, Division of Air Quality (DAQ), indicated that it could commit to include the air impacts of the HAR project in a revision to the State Implementation Plan (SIP). This is one path by which a Federal agency can complete a general conformity determination under 40 CFR Part 93, Subpart B. For DAQ, a key item for its commitment to revise the SIP is the time period for all site building activities (or, in NRC parlance, construction and preconstruction activities).

Previous statements made by PEC representatives (ADAMS Accession Nos. ML080780371 and ML091700186) indicate that PEC has not made a final decision whether to build new reactors at the HAR site and raise the water level behind the main dam of the Harris Reservoir. However, PEC is updating the expected inservice dates (ADAMS Accession No. ML100710419). DAQ may need greater project certainty from PEC before making a written commitment to revise the SIP. Additionally, in an NRC letter dated June 14, 2010 (ADAMS Accession No. ML101470179), the NRC sent a supplemental RAI regarding general conformity and specifically requested an updated analysis of emissions tied directly to one of the six methods for the determination of conformity and an explanation of how the analysis supports that method. The NRC is currently reviewing the PEC response (ADAMS Accession No. ML102170288). The NRC staff will discuss the analysis of emissions with DAQ as part of its supplemental RAI review.

Actions needed: PEC will coordinate with DAQ to resolve any technical issues identified by DAQ in the updated analysis of emissions, with the expectation that all emissions could be incorporated in a future revision to the SIP. PEC will keep the NRC Environmental Project Manager, Dr. Donald Palmrose, informed of the progress with DAQ and on any proposed schedules PEC has reached in agreement with DAQ for a letter of commitment to the U.S. Environmental Protection Agency for incorporating the revision to the SIP.

## Conclusions

The NRC must factor in the scheduling uncertainty resulting from the above open issues to reestablish an updated HAR environmental review schedule. While some flexibility could be factored into the schedule for the HAR COL application environmental review to account for the time needed in order to close open issues, removing such schedule uncertainty would be the best approach. To this end, the NRC staff will schedule the necessary public meetings as soon as is appropriate to discuss these issues and any other items of importance that the NRC staff needs to resolve to develop a revised environmental review schedule.