March 16, 2007

Mr. Robert J. Duncan II, Vice President
Shearon Harris Nuclear Power Plant
Carolina Power & Light Company
Post Office Box 165, Mail Code: Zone 1
New Hill, North Carolina 27562-0165

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 - ISSUANCE OF AMENDMENT ON STEAM GENERATOR TUBE SURVEILLANCE PROGRAM (TAC NO. MD2135)

Dear Mr. Duncan:

The Nuclear Regulatory Commission has issued Amendment No. 124 to Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant, Unit 1. This amendment changes the technical specifications in response to your application dated May 23, 2006, as supplemented by letters dated October 3, 2006 and October 24, 2006.

The amendment revises the existing steam generator tube surveillance program.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's regular biweekly *Federal Register* notice.

Sincerely,

/RA/

Chandu P. Patel, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosures:
1. Amendment No. 124 to NPF-63
2. Safety Evaluation

cc w/enclosures: See next page

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CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-400

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.124
License No. NPF-63

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Carolina Power & Light Company (the licensee), dated May 23, 2006, as supplemented by letters dated October 3, 2006 and October 24, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. NPF-63 is hereby amended to read as follows:

   (2) Technical Specifications and Environmental Protection Plan

   The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. , are hereby incorporated into this license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Stewart N. Bailey, Acting Branch Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Operating License No. NPR-63
and the Technical Specifications

Date of Issuance: March 16, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 124

FACILITY OPERATING LICENSE NO. NPF-63

DOCKET NO. 50-400

Replace page 4 of Facility Operating License No. NPF-63 with the attached revised page 4.

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages	Insert Pages
Index Page vii	Index Page vii
Index Page xiii	Index Page xiii
Index Page xix	Index Page xix
1-3	1-3
1-4	1-4
3/4 4-13	3/4 4-13
3/4 4-14	
3/4 4-15	
3/4 4-16	
3/4 4-17	
3/4 4-18	
3/4 4-19	
3/4 4-21	3/4 4-21
3/4 4-23	3/4 4-23
3/4 4-24	3/4 4-24
6-19d	6-19d
6-19e	6-19e
6-19f	6-19f
6-24c	6-24c
6-24d	6-24d
6-25	

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NO. NPF-63

CAROLINA POWER & LIGHT COMPANY, et al.

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-400

1.0 INTRODUCTION

By letter dated May 23, 2006 (ML061520433 [Agencywide Document Access and Management System Accession Number]), as supplemented by letters dated October 3, 2006 (ML062850259), and October 24, 2006 (ML063050173), the Carolina Power & Light Company (the licensee) submitted a request for changes to the Shearon Harris Nuclear Power Plant, Unit 1 (HNP), Technical Specifications (TS). The requested changes would revise the existing steam generator (SG) tube surveillance program. The changes are modeled after TS Task Force (TSTF) traveler TSTF-449, Revision 4, "Steam Generator Tube Integrity," and the model safety evaluation prepared by the Nuclear Regulatory Commission (NRC) and published in the *Federal Register* on March 2, 2005 (70 FR 10298). The scope of the application includes changes to the definition of leakage, changes to the primary-to-secondary leakage requirements, changes to the SG tube surveillance program (SG tube integrity), changes to the SG reporting requirements, and associated changes to the TS Bases.

The October 3, 2006, and October 24, 2006, letters provided clarifying information that did not expand the scope of the application, and did not change the initial proposed no significant hazards consideration determination.

2.0 REGULATORY EVALUATION

The background, description, and applicability of the proposed changes associated with the SG tube integrity issue and the applicable regulatory requirements were included in the NRC staff's model safety evaluation (SE) published in the *Federal Register* on March 2, 2005 (70 FR 10298). The "Notice of Availability of Model Application Concerning Technical Specification Improvement To Modify Requirements Regarding Steam Generator Tube Integrity Using the Consolidated Line Item Improvement Process" was published in the *Federal Register* on May 6, 2005 (70 FR 24126), and made the model SE available for licensees to reference.

3.0 TECHNICAL EVALUATION

3.1 Overview

The licensee proposed changes to the TSs that are modeled after TSTF-449, "Steam Generator Tube Integrity." There were minor differences between TSTF-449 and the licensee's

application. These included differences in the facility licensing basis (than that discussed in TSTF-449) and differences in TS format and numbering (than that assumed in TSTF-449).

With respect to the differences in the facility licensing basis, the differences did not invalidate the technical evaluation on TSTF-449; rather they resulted in the licensee having to slightly deviate from some of the modifications discussed in TSTF-449. For example, in the Bases section for Reactor Coolant System Operational Leakage, the licensee refers to “upset conditions” rather than the TSTF language of “upset or abnormal conditions.” In addition, in the bases of TSTF-449, the accident radiological analysis for an SG tube rupture (SGTR) assumes that the ruptured SG secondary fluid is only briefly released to the atmosphere via safety valves and that the majority is discharged to the main condenser. However, in the bases for HNP (page 5 of 7 of Insert 3/4.4.5 Bases), the accident radiological analysis for a SGTR assumes that the secondary fluid from the ruptured SG tube is released directly to the atmosphere due to a failure of the SG power-operated relief valve in the open position. Another difference from the TSTF is that due to HNP’s adoption of the alternate source term, the HNP TS Bases reference Title 10 of the *Code of Federal Regulations* (10 CFR) 50.67 rather than 10 CFR Part 100 for the acceptance limits related to radiological dose consequences. In addition to these differences, some of the proposed information included in the TS Bases is not from the TSTF, but it is from the existing TS Bases and from other non-Improved Technical Specifications submittals. Since these differences were minor in nature, they were consistent with the plant's licensing basis, and they were consistent with the intent of TSTF-449, the NRC staff determined they were acceptable.

With respect to the differences in the numbering of the technical specifications, these differences were administrative in nature and did not affect the technical adequacy of the submittal. As a result, the NRC staff determined they were acceptable.

With respect to the differences in the format of the TS, the licensee provided many of the specifications in a paragraph format rather than the tabular format in the TSTF. Since the version proposed by HNP is identical in meaning to the version in the TSTF, the NRC staff determined that these differences were acceptable.

As a result of adopting TSTF-449, the licensee also proposed changes to the TS Bases pertaining to reactor coolant system operational leakage. These changes were necessary to facilitate adopting the proposed changes in TSTF-449. Since these proposed TS changes pertaining to reactor coolant system operational leakage were generally consistent with the standard TS and were consistent with the plant's licensing basis, the NRC staff determined that the proposed changes were acceptable.

The remainder of the application is consistent with, or more limiting than, TSTF-449. In summary, the NRC staff determined that the model safety evaluation is applicable to this review and finds the proposed changes acceptable.

Consistent with TSTF-449, the proposed TS changes include: (1) a revised definition of LEAKAGE and PRESSURE BOUNDARY LEAKAGE, (2) a new TS 3/4.4.5, "Steam Generator (SG) Tube Integrity," (3) a revised TS TS 3/4.4.6.1, “Reactor Coolant System Leakage Detection Systems,” (4) a revised TS 3/4.4.6.2, “Reactor Coolant System Operational Leakage,” (5) a new TS 6.8.4.l, “Steam Generator (SG) Program,” (6) a new TS 6.9.1.7,

"Steam Generator Tube Inspection Report," and (7) a revised Table of Content pages to reflect the proposed changes.

3.2 Summary

The proposed TS changes establish a programmatic, largely performance-based regulatory framework for ensuring SG tube integrity. The NRC staff finds that it addresses key shortcomings of the current framework by ensuring that SG programs are focused on accomplishing the overall objective of maintaining tube integrity. It incorporates performance criteria for evaluating tube integrity that the NRC staff finds consistent with the structural margins and the degree of leak tightness assumed in the current plant licensing basis. The NRC staff finds that maintaining these performance criteria provides reasonable assurance that the SGs can be operated safely without increase in risk.

The revised TSs will contain limited specific details concerning how the SG Program is to achieve the required objective of maintaining tube integrity; the intent being that the licensee will have the flexibility to determine the specific strategy for meeting this objective. However, the NRC staff finds that the revised TSs include sufficient regulatory constraints on the establishment and implementation of the SG Program such as to provide reasonable assurance that tube integrity will be maintained.

Failure to meet the performance criteria will be reportable pursuant to the requirements in 10 CFR Parts 50.72 and 50.73. The NRC reactor oversight process provides a process by which the NRC staff can verify that the licensee has identified any SG Program deficiencies that may have contributed to such an occurrence and that appropriate corrective actions have been implemented.

In conclusion, the NRC staff finds that the TS changes proposed by the licensee in its May 23, 2006, application and October 3, 2006 and October 24, 2006, supplements conform to the requirements of 10 CFR 50.36 and establish a TS framework that will provide reasonable assurance that SG tube integrity is maintained without undue risk to public health and safety.

The licensee included in its application the revised TS Bases to be implemented with the TS change. The NRC staff finds that the TS Bases Control Program is the appropriate process for updating the affected TS Bases pages and has, therefore, not included the affected Bases pages with this amendment.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of North Carolina official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The

Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (71 FR 75991, December 19, 2006). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

A complete list of references used to complete this review can be found in the NRC's model SE published in the *Federal Register* on March 2, 2005 (70 FR 10298).

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Date: March 16, 2007

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