

September 10, 2001

Mr. James Scarola, 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 - ISSUANCE OF
AMENDMENT REGARDING USE OF ALTERNATE SOURCE RANGE NEUTRON
FLUX MONITORS IN REFUELING MODE (TAC NO. MB0783)

Dear Mr. Scarola:

The Nuclear Regulatory Commission has issued Amendment No. 105 to Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant (HNP), in response to your request dated December 13, 2000, as supplemented on February 9, and August 3, 2001. This amendment revises Technical Specification (TS) 3/4.9.2, "Refueling Operations - Instrumentation," and the associated Bases, to permit using one Source Range Nuclear Flux Monitor and one Wide Range Neutron Flux Monitor during MODE 6 (Refueling) instead of the two Source Range Nuclear Flux Monitors specified in the current HNP TS.

A copy of the Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's regular bi-weekly Federal Register notice.

Sincerely,

/RA by N. Kalyanam for R. Laufer/

Richard J. Laufer, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosures:

1. Amendment No. 105 to NPF-63
2. Safety Evaluation

cc w/enclosures:
See next page

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OFFICE	PM:PDII/S2	LA:PDII/S2	BC:SRXB	SC:RTSB	SC:EEIB	OGC	SC:PDII-2
NAME	NKalyanam for RLaufer	EDunnington	JWermiel	RDennig	ECMarinos	RHoefling	RCorreia
DATE	08/13/01	08/09/01	08/09/01	09/17/01	08/09/01	08/21/01	09/10/01
COPY	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

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AMENDMENT NO. 105 TO FACILITY OPERATING LICENSE NO. NPF-63 - HARRIS, UNIT 1

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CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-400

SHEARON HARRIS NUCLEAR POWER PLANT
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 105
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 December 13, 2000, as supplemented on February 9, and August 3, 2001, 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.105, 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 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 10, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 105

FACILITY OPERATING LICENSE NO. NPF-63

DOCKET NO. 50-400

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

3/4 9-3
B 3/4 9-1

Insert Pages

3/4 9-3
B 3/4 9-1

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 105 TO FACILITY OPERATING LICENSE NO. NPF-63
CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400

1.0 INTRODUCTION

By letter dated December 13, 2000, as supplemented on February 9, and August 3, 2001, Carolina Power & Light Company (CP&L, the licensee) submitted a request for a change to the Shearon Harris Nuclear Power Plant (HNP) Technical Specifications (TS). The proposed change would revise TS 3/4.9.2, "Refueling Operations - Instrumentation," and the associated Bases, to permit using one Source Range Nuclear Flux Monitor (SRNFM) and one Wide Range Neutron Flux Monitor (WRNFM) during MODE 6 (Refueling) instead of the two Source Range Nuclear Flux Monitors specified in the current HNP TS.

The February 9, and August 3, 2001, supplements provided clarifying information that did not expand the application beyond the scope of the initial *Federal Register* notice, nor change the staff's initial proposed no significant hazards consideration determination.

2.0 BACKGROUND

Currently, the HNP TS require two SRNFMs to be operable in Mode 6. Specifically, TS 3.9.2 states:

As a minimum, two Source Range Neutron Flux Monitors shall be OPERABLE, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

The function of the SRNFMs is to provide direct neutron flux monitoring of the core to detect changes in core reactivity, which could potentially result in a loss of the required shutdown margin. Inoperability of the SRNFMs at HNP has previously delayed refueling activities. To avoid these delays in the future, the licensee is proposing to revise TS 3.9.2 to allow using one SRNFM and one WRNFM instead of the two SRNFMs currently specified.

The licensee's proposal would change TS 3.9.2 to state:

As a minimum, two Source Range Neutron Flux Monitors* shall be OPERABLE, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

With the footnote

* A Wide Range Neutron Flux Monitor may be substituted for one of the Source Range Neutron Flux Monitors provided the OPERABLE Source Range Neutron Flux Monitor is capable of providing audible indication in the containment and in the control room.

In addition, the licensee proposes changing the bases for TS 3/4.9.2 to state:

The OPERABILITY of the Source Range Neutron Flux Monitors and/or Wide Range Neutron Flux Monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core. If the audible indication is lost, then enter LCO Action 3.9.2.b.

3.0 EVALUATION

The licensee's proposal would allow a WRNFM to be used as an alternate for an inoperable SRNFM.

The WRNFM provides the same level of quality assurance, redundancy, and necessary display range as the SRNFM. Although the WRNFM detector has a neutron sensitivity of 1.0 cps/nv, compared to the SRNFM detector sensitivity of 10 cps/nv, the difference in sensitivity is acceptable since the purpose of the detectors is to monitor trends in neutron flux, which can be accomplished with the visible indication on the WRNFM channel. A WRNFM channel (SR Indicator) is required to be operable per TS 3/4.3.3.5 "Remote Shutdown System" in Modes 1-3. The function of the WRNFM for TS 3/4.3.3.5 is to monitor the core reactivity in a shutdown condition, which is also the function of the SRNFM in Mode 6. Therefore, there are no potential adverse consequences of using a WRNFM in place of an SRNFM.

The HNP accident analyses do not credit the operation of SRNFMs in Mode 6 to mitigate the consequences of a boron dilution accident or an inadvertent loading and operation of a fuel assembly in an improper position. The licensee's proposed use of an WRNFM during refueling operations will not affect the ability to monitor reactivity in the core. The required shutdown margin will continue to be maintained and the source range monitors will continue to provide the required visual indication in the control room along with audible indication in containment and the control room. Therefore, the staff finds the proposed changes acceptable.

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 and changes a surveillance requirement. 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 (66 FR 7672). 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.

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Date: September 10, 2001

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