

May 17, 1993

Mr. G. E. Vaughn  
Vice President  
Shearon Harris Nuclear Power Plant  
Post Office Box 165, Mail Code: Zone 1  
New Hill, North Carolina 27562-0165

Dear Mr. Vaughn:

SUBJECT: ISSUANCE OF AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-63 REGARDING FLOW PATHS - OPERATING, CHARGING PUMPS - OPERATING AND SAFETY VALVES - SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 (TAC NO. M79410)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 36 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 request dated December 28, 1990, as supplemented April 10, 1991, September 29, 1992, and February 10, 1993.

The amendment revises the Action Requirements associated with Technical Specifications (TS) 3.1.2.2, Flow Paths - Operating; TS 3.1.2.4, Charging Pumps - Operating; and TS 3.7.1.1, Safety Valves.

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

Sincerely,

ORIGINAL SIGNED BY:

Ngoc B. Le, Project Manager  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No.36 to NPF-63
- 2. Safety Evaluation

cc w/enclosures:

See next page

\*See previous concurrence

OFC	LA:PD21:DRPE	PM:PD21:DRPE	OGC*	D:PD21:DRPE	BC:OTSB*
NAME	PDAnderson <i>EM</i>	NBLe:tmw <i>TK</i>	CABarth	EGAdensam	CIGrimes
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AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-63 - HARRIS, UNIT 1

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-400

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 36  
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 28, 1990, as supplemented April 10, 1991, September 29, 1992, and February 10, 1993, 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. 36, 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.

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3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*Elinor G. Adensam*

Elinor G. Adensam, Director  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachments:  
Changes to the Technical  
Specifications

Date of Issuance: May 17, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 36

FACILITY OPERATING LICENSE NO. NPF-63

DOCKET NO. 50-400

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Remove Pages

Insert Pages

3/4 1-8

3/4 1-8

3/4 1-10

3/4 1-10

3/4 7-1

3/4 7-1

## REACTIVITY CONTROL SYSTEMS

### FLOW PATHS - OPERATING

#### LIMITING CONDITION FOR OPERATION

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3.1.2.2 At least two of the following three boron injection flow paths shall be OPERABLE:

- a. The flow path from the boric acid tank via a boric acid transfer pump and a charging/safety injection pump to the Reactor Coolant System (RCS), and
- b. Two flow paths from the refueling water storage tank via charging/safety injection pumps to the RCS.

APPLICABILITY: MODES 1, 2, and 3.

#### ACTION:

With only one of the above required boron injection flow paths to the RCS OPERABLE, restore at least two boron injection flow paths to the RCS to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN as required by Figure 3.1-1 at 200°F within the next 6 hours; restore at least two flow paths to OPERABLE status within the next 7 days or be in HOT SHUTDOWN within the next 6 hours.

#### SURVEILLANCE REQUIREMENTS

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4.1.2.2 At least two of the above required flow paths shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that the temperature of the flow path between the boric acid tank and the charging/safety injection pump suction header tank is greater than or equal to 65°F when a flow path from the boric acid tank is used;
- b. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position;
- c. At least once per 18 months during shutdown by verifying that each automatic valve in the flow path actuates to its correct position on a safety injection test signal; and
- d. At least once per 18 months by verifying that the flow path required by Specification 3.1.2.2a. delivers at least 30 gpm to the RCS.

REACTIVITY CONTROL SYSTEMS

CHARGING PUMPS - OPERATING

LIMITING CONDITION FOR OPERATION

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3.1.2.4 At least two charging/safety injection pumps shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With only one charging/safety injection pump OPERABLE, restore at least two charging/safety injection pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN as required by Figure 3.1-1 at 200°F within the next 6 hours; restore at least two charging/safety injection pumps to OPERABLE status within the next 7 days or be in HOT SHUTDOWN within the next 6 hours.

SURVEILLANCE REQUIREMENTS

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4.1.2.4 At least two charging/safety injection pumps shall be demonstrated OPERABLE by verifying, on recirculation flow or in service supplying flow to the Reactor Coolant System and reactor coolant pump seals, that a differential pressure across each pump of greater than or equal to 2446 psid is developed when tested pursuant to Specification 4.0.5.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

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3.7.1.1 All main steam line Code safety valves associated with each steam generator shall be OPERABLE with lift settings as specified in Table 3.7-2.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With one or more main steam line Code safety valves inoperable, operation may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Range Neutron Flux High Trip Setpoint is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.7.1.1 No additional requirements other than those required by Specification 4.0.5.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-63  
CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1  
DOCKET NO. 50-400

1.0 INTRODUCTION

By letter dated December 28, 1990, as supplemented April 10, 1991, September 29, 1992, and February 10, 1993, Carolina Power & Light Company (CP&L or the licensee) submitted a request for changes to the Shearon Harris Nuclear Power Plant, Unit 1 (SHNPP) Technical Specifications (TS). The amendment revises the Action Requirements associated with TS 3.1.2.2, Flow Paths - Operating; TS 3.1.2.4, Charging Pumps - Operating; and TS 3.7.1.1 - Safety Valves. The April 10, 1991, September 29, 1992, and February 10, 1993, letters provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

Currently, these specifications are applicable in plant operating Modes 1, 2, and 3, but require the facility to be placed in Mode 5 (Cold Shutdown) if any of the above equipment is out of service and operability cannot be restored within the time interval allowed by the Limiting Condition for Operation (LCO). The proposed changes would modify the current requirement to specify that the facility be placed in Mode 4 (Hot Shutdown), instead of the Mode 5 (Cold Shutdown), if equipment associated with the TS cannot be restored to operable status within the specified allowed outage time. The proposed changes also establish six hours as the time allowed to reach Mode 4 upon exceeding an allowable outage time.

The staff compared the December 28, 1990, amendment request with the improved Standard Technical Specifications (STS) provided in the enclosure to the June 30, 1992, letter from Thomas Murley, NRC, to the four nuclear supply system vendor owners groups and concluded that the incorporation of selected portions of the STS would be in keeping with the Technical Specification Improvement Program.

In a July 9, 1992, letter to the licensee, the staff suggested that, as a step toward achieving standardization of TS within the industry, TS 3.1.2.2., Flow Paths - Operating, and TS 3.1.2.4, Changing Pumps - Operating, may be relocated in accordance with the STS.

The staff also stated its belief that, in addition to changing TS 3.7.1.1 to be consistent with the STS, the incorporation of TS 3.7.4, Atmosphere Dump Valves (ADVS), from the STS, would also be a significant step in achieving

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standardization of TS within the industry. In its letter of September 29, 1992, the licensee advised the staff that it did not intend to adopt the changes identified.

During a meeting on November 12, 1992, and in a letter dated January 26, 1993, the licensee stated that it had no plans to implement the STS at SHNPP.

## 2.0 EVALUATION

In its letter of January 26, 1993, the licensee stated that the amendment request had utilized the guidance contained in Generic Letter 87-09, "Sections 3.0 and 4.0 of the Standard Technical Specifications (STS) on the Applicability of Limiting Conditions for Operation and Surveillance Requirements." That general guidance is that TS should be constructed such that Action Statements only require shutdown to the first mode in which the TS is not applicable. In STS issued earlier and in many plant TS including those for SHNPP, several TS required shutdown to the second mode beyond the modes of applicability. To evaluate the requested changes to TS 3.1.2.2, Reactivity Control Systems, Flow Paths - Operating, and TS 3.1.2.4, Reactivity Control Systems, Charging Pumps - Operating, the staff reviewed the comparable TS for the shutdown condition (TS 3.1.2.1 Flow Path-Shutdown and TS 3.1.2.3 Charging Pump-Shutdown) which are applicable in Modes 4, 5, and 6. In these modes, the specifications for the shutdown condition (TS 3.1.2.1 and TS 3.1.2.3) only require one flow path and one charging pump to be OPERABLE and furthermore they prohibit plant operation with two pumps in Mode 4 when the temperature of one or more of the RCS cold legs is less than or equal to 325°F. Therefore, the requested changes provide the required shutdown to the first mode in which the TS is not applicable. The staff concludes that the proposed changes eliminate potential misunderstandings and, therefore, are acceptable.

The staff reviewed the proposed change to TS 3.7.1.1, Safety Valves, and in a letter to the licensee dated July 9, 1992, the staff stated its belief that, in addition to changing this TS to be consistent with the STS, the incorporation of TS 3.7.4, Atmospheric Dump Valves (ADVs), from the STS, would also be a significant step in achieving standardization of TS within the industry. However, the licensee in its September 29, 1992, letter stated "... the new TS for Atmospheric Dump Valves is neither related to the changes or the purpose for CP&L's Request for License Amendment nor part of the Westinghouse Standard Technical Specifications upon which the current SHNPP Technical Specifications are based." In a meeting with the licensee on January, 29, 1993, the staff asked whether the main steam safety valves subject to TS 3.7.1.1 provide a safety function in Mode 4 (Hot Shutdown). In a letter dated February 10, 1993, the licensee stated that the main steam safety valves provide no heat removal safety function in Mode 4 and TS 3.6.3, Containment Isolation Valves, requires their operability in Mode 4 as containment isolation valves. In the absence of a heat removal safety function in Mode 4, the staff concludes that operability of the ADVs in Mode 4 is not required.

In addition, the staff reviewed TS 3.4.1.4, Hot Shutdown, and notes that this TS allows plant operation in Mode 4 using two or more steam generators for rejecting heat to the secondary system. With the main steam lines isolated,

cooling would be by the auxiliary feedwater system and the ADVs. Thus, and as reflected in the STS, operation of the auxiliary feedwater system and the ADVs is required in Modes 1, 2 and 3, and in Mode 4 when using the steam generators for heat removal function. The licensee's position during this review is that adoption of the STS for the ADVs in the SHNPP is a backfit issue. The staff concludes that the implementation of the requested change in TS 3.7.1.1, Safety Valves, is acceptable independent of lack of actions relating to TS for the ADVs.

While the staff continues to encourage licensees to voluntarily adopt provisions that are in the STS, the staff concludes that for this particular license action, compliance with the STS is not necessary.

Furthermore, TS 3.1.2.2, TS 3.1.2.4, and TS 3.7.1.1 are applicable in Modes 1, 2, and 3; however, the current Action Requirements call for a reduction to Mode 5 (Cold Shutdown) within the next 30 hours if the associated equipment cannot be restored to operable status within the allowable outage time. The proposed change revised the Action Requirements for TS 3.1.2.2, TS 3.1.2.4, and TS 3.7.1.1 to place the unit in Mode 4 (Hot Shutdown) within the next 6 hours upon exceeding the allowable outage time. The staff finds the proposed change to 6 hours to be consistent with the intent of TS 3.0.1 and its associated TS Bases described in Generic Letter 87-09, and based on the above review, the staff concurs with the licensee's analyses for the above proposed changes, and found the proposed changes to be acceptable.

### 3.0 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.

### 4.0 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 (56 FR 6869). 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.

5.0 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.

Principal Contributors: C. W. Moon  
N. B. Le

Date: May 17, 1993