

September 8, 1992

Docket No. 50-400

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Mr. R. A. Watson
Senior Vice President
Nuclear Generation
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Dear Mr. Watson:

SUBJECT: ISSUANCE OF AMENDMENT NO. 32 TO FACILITY OPERATING LICENSE
NO. NPF-63 REGARDING CALIBRATION MEASUREMENT INSTRUMENTATION
- SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 (TAC NO. M82349)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 32 to Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant, Unit 1. This amendment changes the Technical Specifications (TS) in response to your request dated December 16, 1991.

The amendment revises the calibration measurement instrumentation in TS 4.2.3.5 to change the allowable time period for calibration of instrumentation utilized in the performance of the reactor coolant system calorimetric flow measurement from 7 to 21 days.

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. 32 to NPF-63
2. Safety Evaluation

cc w/enclosures:

See next page

OFFICE	LA:PD21:DRPE	PM:PD21:DRPE	OGC	D:PD21:DRPE
NAME	PAnderson	NLe	E Holler	EAdensam
DATE	8/26/92	8/27/92	8/28/92	9/8/92

Document Name: HAR82349.AMD

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Mr. R. A. Watson
Carolina Power & Light Company

Shearon Harris Nuclear Power Plant,
Unit 1

cc:

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Manager - Legal Department
Carolina Power & Light Company
P. O. Box 1551
Raleigh, North Carolina 27602

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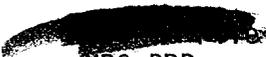
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AMENDMENT NO. 32 TO FACILITY OPERATING LICENSE NO. NPF-63 - HARRIS, UNIT 1



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cc: Harris Service List



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

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-400

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 32
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 16, 1992, 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:

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(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. 32, 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



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 8, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 32

FACILITY OPERATING LICENSE NO. NPF-63

DOCKET NO. 50-400

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

Remove Page

3/4 2-10

Insert Page

3/4 2-10

POWER DISTRIBUTION LIMITS

LIMITING CONDITION FOR OPERATION

ACTION (Continued):

- b. Within 24 hours of initially being outside the above limits, verify through incore flux mapping and RCS total flow rate determination that $F_{\Delta H}$ and RCS total flow rate are restored to within the above limits, or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.
- c. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the reduced THERMAL POWER limit required by ACTION a.2. and/or b., above; subsequent POWER OPERATION may proceed provided that $F_{\Delta H}$ and indicated RCS total flow rate are demonstrated, through incore flux mapping and RCS total flow rate determination, to be within acceptable limits prior to exceeding the following THERMAL POWER levels:
 1. A nominal 50% of RATED THERMAL POWER,
 2. A nominal 75% of RATED THERMAL POWER, and
 3. Within 24 hours of attaining greater than or equal to 95% of RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

- 4.2.3.1 The provisions of Specification 4.0.4 are not applicable.
- 4.2.3.2 $F_{\Delta H}$ shall be determined to be within acceptable limits:
 - a. Prior to operation above 75% of RATED THERMAL POWER after each fuel loading, and
 - b. At least once per 31 Effective Full Power Days.
- 4.2.3.3 The RCS total flow rate shall be verified to be within the acceptable limit:
 - a. At least once per 12 hours by the use of main control board instrumentation or equivalent, and
 - b. At least once per 31 days by the use of process computer readings or digital voltmeter measurement.
- 4.2.3.4 The RCS total flow rate indicators shall be subjected to a CHANNEL CALIBRATION at least once per 18 months.
- 4.2.3.5 The RCS total flow rate shall be determined by precision heat balance measurement at least once per 18 months. The measurement instrumentation shall be calibrated within 21 days prior to the performance of the calorimetric flow measurement.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 32 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 16, 1991, the Carolina Power & Light Company (the licensee) submitted a request for changes to the Shearon Harris Nuclear Power Plant, Unit 1, Technical Specifications (TS).

The amendment revises TS 4.2.3.5 so the allowable time period for the use of calibrated instrumentation utilized in the performance of the reactor coolant system (RCS) calorimetric flow measurement would be increased from 7 to 21 days.

2.0 BACKGROUND

The reactor coolant system (RCS) flow rate is required to be verified at the beginning of each cycle with a precision primary and secondary energy balance. This precision energy balance relies on instrumentation for measuring RCS and secondary system parameters which must first be calibrated. The time period between this calibration and performance of the energy balance may have an effect on the accuracy of the RCS calorimetric flow measurement because the instruments used may drift during this period. WCAP-12340, "Westinghouse Improved Thermal Design Procedure Instrumentation Uncertainty Methodology for Carolina Power & Light Company Shearon Harris Nuclear Power Station," documents the 2.1 percent uncertainty allowance to measured flow rate. This allowance includes the uncertainty associated with performing the precision flow calorimetric uncertainty plus the uncertainty associated with measuring flow with cold leg elbow taps during operation. The flow measurement uncertainty of 2.1 percent is based on no drift of the calibrated instrumentation with the assumption that the flow measurement is performed within 30 days of calibrating the measurement instrumentation. To assure that there would be no drift, the current TS 4.2.3.5 specifies that the calibrated instruments would be used within 7 days of their being calibrated. However, the 7 day limitation has proved to be too restrictive and the licensee proposes to change the limitation from 7 days to 21 days.

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3.0 EVALUATION

The 2.1 percent flow measurement uncertainty was determined assuming that the flow measurement is performed within the calibration (or guaranteed accuracy) period for the measurement instrumentation and, therefore, does not include a penalty calibration drift. Currently, 7 days is designated in TS 4.2.3.5 as the calibration period. However, the analyses in WCAP-11168, Revision 1, and WCAP-12340, which provide the basis for the 2.1 percent flow measurement uncertainty, allow a calibration period of up to 30 days before a drift penalty is required. Therefore, the request to revise the allowable time period from 7 days to 21 days for the calibration of instrumentation utilized in the performance of the RCS calorimetric flow measurement is justified because the 21 day period falls well within the 30 day analysis value documented in WCAP-12340. In addition, a December 16, 1991, letter from G. E. Vaughn, CPL, to the NRC states that an analysis of vendor transmitter test data shows that any increase in instrument drift between 7 days and 21 days is negligible. We, therefore, find the change to 21 days to be acceptable.

4.0 SUMMARY

The staff has reviewed the proposed change in TS 4.2.3.5 to increase the maximum calibration period of the measurement instrumentation used for the precision energy balance from 7 days to 21 days and found it to be acceptable.

5.0 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.

6.0 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 (57 FR 6035). 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.

7.0 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 Contributor: H. Balukjian

Date: September 8, 1992