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SUBJECT: Application for amend to license NPF-63, eliminating response time testing for selected pressure & differential pressure sensors.

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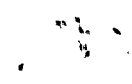
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Carolina Power & Light Company
PO Box 165
New Hill NC 27562

William R. Robinson
Vice President
Harris Nuclear Plant

MAR - 3 1995

Letter Number: HO-950130

SERIAL: HNP-95-013
10 CFR 50.90

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
ELIMINATION OF RESPONSE TIME TESTING FOR SELECTED
PRESSURE AND DIFFERENTIAL PRESSURE SENSORS

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light Company (CP&L) hereby requests a revision to the Technical Specifications (TS) for the Shearon Harris Nuclear Power Plant (SHNPP). This amendment proposes to revise Technical Specification Surveillance Requirements 4.3.1.2, Reactor Trip System Instrumentation, and 4.3.2.2, Engineered Safety Features Actuation System Instrumentation and the associated bases to eliminate the requirement to perform periodic testing of the response times for selected pressure and differential pressure sensors.

Enclosure 1 provides a detailed description of the proposed changes and the basis for the changes.

Enclosure 2 details, in accordance with 10 CFR 50.91(a), the basis for the Company's determination that the proposed changes do not involve a significant hazards consideration.

Enclosure 3 provides an environmental evaluation which demonstrates that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental assessment needs to be prepared in connection with the issuance of the amendment.

Enclosure 4 provides page change instructions for incorporating the proposed revisions.

Enclosure 5 provides the proposed Technical Specification pages.

In accordance with 10 CFR 50.91(b), CP&L is providing the State of North Carolina with a copy of the proposed license amendment.

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PDR ADDCK 05000400
PDR

State Road 1134 New Hill NC Tel 919 362-2502 Fax 919 362-2095

ADD 1



CP&L requests approval of the proposed amendment by August 1, 1995, in order to support the upcoming SHNPP refueling outage. In order to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications, CP&L requests that the proposed amendments, once approved by the NRC, be issued such that implementation will occur within 60 days of issuance of the amendment.

Please refer any questions regarding this submittal to Mr. D. C. McCarthy at (919) 362-2100.

Sincerely,



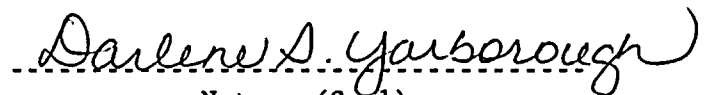
W. R. Robinson

MGW/mgw

Enclosures:

1. Basis for Change Request
2. 10 CFR 50.92 Evaluation
3. Environmental Considerations
4. Page Change Instructions
5. Technical Specification Pages

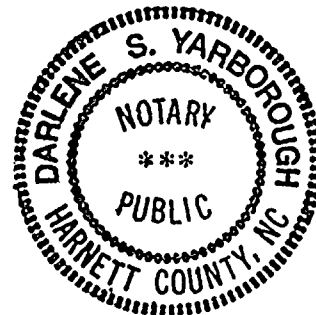
W. R. Robinson, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.



Notary (Seal)

My commission expires: 2/6/2000

c: Mr. Dayne H. Brown
Mr. S. D. Ebnetter
Mr. S. A. Elrod
Mr. N. B. Le





ENCLOSURE 1

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
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BASIS FOR CHANGE REQUEST

Background

Currently, Technical Specification Surveillance Requirement 4.3.1.2 requires that the Reactor Trip System Response Time of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months, where N is the total number of redundant channels in a specific reactor trip function.

Technical Specification Surveillance Requirement 4.3.2.2 currently requires that the Engineered Safety Features Response Time of each Engineered Safety Features Actuation Signal (ESFAS) shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one train such that both trains are tested at least once per 36 months, and one channel per function such that all channels are tested at least once per N times 18 months, where N is the total number of redundant channels in a specific ESFAS function.

Surveillance Requirements 4.3.1.2 and 4.3.2.2 provide assurance that the Reactor Trip and Engineered Safety Features (ESF) actuation associated with each channel is completed within the time limits assumed in the safety analyses. Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time. Sensor response time verification may be demonstrated by either: (1) in place, onsite, or offsite test measurements, or (2) utilizing replacement sensors with certified response times.

Proposed Change

This amendment proposes to eliminate the requirement to perform periodic measurement testing of the response times for selected pressure and differential pressure sensors. The requirement that Reactor Trip and Engineered Safety Features Response Time functions be within their specified limit at least once per 18 months will be verified instead of demonstrated. The associated bases section for response time requirements will be changed to allow the sensor response time portion of the channel response time to use historical records, testing results, or vendor supplied engineering specifications. No other changes to response time methods are included in this change.

Basis

The proposed change will eliminate the periodic response time testing for selected pressure and differential pressure sensors. IEEE Standard 338-1977, "Criteria for the Periodic Testing of Class 1E Power and Protection Systems," defines the bases for eliminating response time testing. Section 6.3.4 states in part:

"Response time testing of all safety-related equipment, per se, is not required if, in lieu of response time testing, the response time of the safety system equipment is verified by functional testing, calibration check, or other tests, or both."

Westinghouse Owners Group topical report WCAP-13632, "Elimination of Pressure Sensor Response Time Testing Requirements," Revision 1, provides the technical justification for deletion of the periodic response time testing of selected pressure sensing instruments. The program described in WCAP-13632 utilizes the recommendations contained in EPRI Report NP-7243, "Investigation of Response Time Testing Requirements," Revision 1, for justifying elimination of response time testing surveillance requirements on certain pressure and differential pressure sensors. To address other sensors installed in Westinghouse designed plants, WCAP-13632 contains a similarity analysis to sensors in EPRI Report NP-7243 or a Failure Mode and Effects Analysis (FMEA) to provide justification for elimination of response time testing requirements. The specific sensors installed at the Harris Plant are:

| | | |
|---------------------------------------|------------|-----------|
| Pressurizer Pressure | Rosemount | 1154SH9RA |
| Containment Pressure | ITT Barton | 752, 351 |
| Steamline Pressure | ITT Barton | 763 |
| Steam Generator Level | ITT Barton | 764 |
| Steam Generator Level | Tobar | 32DP1 |
| Reactor Coolant Flow | Rosemount | 1154HP5RA |
| Refueling Water Storage Tank Level | ITT Barton | 752 |
| Refueling Water Storage Tank Level | Rosemount | 1153DB5RA |

The basis for eliminating periodic response time testing for each of the above listed sensors is discussed in WCAP-13632. The report provides justification that any sensor failure that significantly degrades response time will be detectable during surveillance testing such as calibration and channel checks.

Carolina Power & Light Company has reviewed Westinghouse Owners Group topical report WCAP-13632 and has determined that the specific sensors installed at the Harris Plant as identified above are bounded by the WCAP.

Conclusions

Based upon the above discussion, the Harris Plant Technical Specifications can be revised to indicate that system response time shall be verified utilizing a sensor response time justified by the methodology described in WCAP-13632 Revision 1. Allocations for sensor response times may be obtained from: (1) historical records based on acceptable response time tests (hydraulic, noise, or power interrupt tests), (2) in place, onsite, or offsite (e.g. vendor) test measurements, or (3) utilizing vendor engineering specifications.

ENCLOSURE 2

SHEARON HARRIS NUCLEAR POWER PLANT
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10 CFR 50.92 EVALUATION

The Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Carolina Power & Light Company has reviewed this proposed license amendment request and determined that its adoption would not involve a significant hazards determination. The bases for this determination are as follows:

Proposed Change

This amendment proposes to eliminate the requirement to perform periodic measurement testing of the response times for selected pressure and differential pressure sensors. The requirement that Reactor Trip and Engineered Safety Features Response Time functions be within their specified limit at least once per 18 months will be verified instead of demonstrated. The associated bases section for response time requirements will be changed to allow the sensor response time portion of the channel response time to use historical records, testing results, or vendor supplied engineering specifications. No other changes to response time methods are included in this change.

Basis

This change does not involve a significant hazards consideration for the following reasons:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendment does not result in a condition where the design, material, or construction standards that were applicable prior to the change are altered nor does it modify any system interface. The same Reactor Trip System and Engineered Safety Features Actuation System instrumentation is being used; the time response allocations/modeling assumptions in the Final Safety Analysis Report (FSAR) Chapter 15 analyses are still the same; only the method of verifying time response is changed. The proposed activity will not change, degrade, or prevent actions or alter any assumptions previously made in evaluating the radiological

consequences of an accident described in the FSAR. Therefore, there would be no increase in the probability or consequences of an accident previously evaluated.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment does not alter the performance of the pressure and differential pressure transmitters used in the plant protection systems. The sensors will still have response time verified by test before placing the sensor in operational service and after any maintenance that could affect response time. Changing the method of periodically verifying instrument response for certain sensors (assuring equipment operable) from time response testing to calibration and channel checks will not create any new accident initiators or scenarios. Periodic surveillance of these instruments will detect significant degradation in the sensor response characteristic. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed amendment does not involve a significant reduction in the margin of safety.

The proposed amendment does not affect the total system response time assumed in the safety analysis. The periodic system response time verification method for selected pressure and differential pressure sensors is modified to allow use of actual test data or engineering data. The method of verification still provides assurance that the total system response is within that defined in the safety analysis, since calibration tests will detect any degradation which might significantly affect sensor response time. Therefore, the proposed changes do not involve a significant reduction in the margin of safety.

ENCLOSURE 3

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ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) provides criterion for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (3) result in a significant increase in individual or cumulative occupational radiation exposure. Carolina Power & Light Company has reviewed this request and determined that the proposed 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 needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows:

Proposed Change

This amendment proposes to eliminate the requirement to perform periodic measurement testing of the response times for selected pressure and differential pressure sensors. The requirement that Reactor Trip and Engineered Safety Features Response Time functions be within their specified limit at least once per 18 months will be verified instead of demonstrated. The associated bases section for response time requirements will be changed to allow the sensor response time portion of the channel response time to use historical records, testing results, or vendor supplied engineering specifications. No other changes to response time methods are included in this change.

Basis

The change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) for the following reasons:

1. As demonstrated in Enclosure 2, the proposed amendment does not involve a significant hazards consideration.
2. The proposed amendment does not result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed amendment changes the periodic system response time verification method for selected pressure and differential pressure

sensors to allow use of test data or engineering data in lieu of performing sensor response time testing. There will be no physical changes to plant equipment, logic or control functions. As such, the change can not affect the types or amounts of any effluents that may be released offsite.

3. The proposed amendment does not result in a significant increase in individual or cumulative occupational radiation exposure.

The proposed amendment changes the periodic system response time verification method for selected pressure and differential pressure sensors to allow use of test data or engineering data in lieu of performing sensor response time testing. No physical plant changes are being made and no new surveillances are being created. Furthermore, the elimination of the required sensor testing will result in reducing the risk of occupational radiation exposures to the plant maintenance staff. Therefore, the amendment will not result in a significant increase in either individual or cumulative occupational radiation exposure.

ENCLOSURE 4
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PAGE CHANGE INSTRUCTIONS

| <u>Removed Page</u> | <u>Inserted Page</u> |
|---------------------|----------------------|
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| 3/4 3-17 | 3/4 3-17 |
| B 3/4 3-2 | B 3/4 3-2 |
| -- | B 3/4 3-2a |