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SUBJECT: Application for amend to license DPR-23, consisting of proposed TS change request that adds requirement for refueling interval calibration & deletes separate requirement for refueling interval functional test.

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Carolina Power & Light Company

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NOV 20 1992

R. B. STARKEY, JR.  
Vice President  
Nuclear Services Department

SERIAL: NLS-92-294  
10 CFR 50.90

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

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/LICENSE NO. DPR-23

REQUEST FOR LICENSE AMENDMENT  
CALIBRATION REQUIREMENTS FOR AUXILIARY FEEDWATER FLOW INDICATION

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 (TSS) for the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2).

This TS change request adds a requirement for a refueling interval calibration of the Auxiliary Feedwater (AFW) flow instrumentation and deletes the separate requirement for a refueling interval functional test. A change in the type of instrumentation used to monitor AFW flow resulted in a change in the method of operability verification required. The new instrumentation, installed by a plant modification, can be calibrated; whereas, the old instrumentation could only be functionally tested.

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 TS pages.

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

In order to allow time for procedure revision and orderly incorporation into copies of the TSS, 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. R. W. Prunty at (919) 546-7318.

Yours very truly,

  
R. B. Starkey, Jr.

RES/jbw

Enclosures:

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

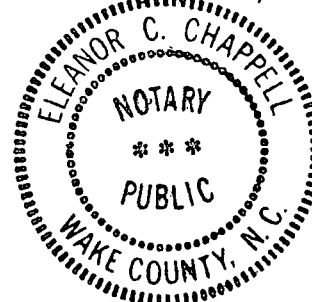
cc: Mr. S. D. Ebnetter  
Mr. L. W. Garner  
Ms. B. L. Mozafari  
Mr. Heyward G. Shealy (SC)  
Attorney General (SC)

R. B. Starkey, Jr., 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: 2/6/94



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BASIS FOR CHANGE REQUEST

Background

In order to improve the accuracy and reliability of the AFW flow indication on the Reactor-Turbine-Generator Board (RTGB), CP&L replaced the existing ultrasonic flow sensors with an annubar-type differential pressure flow measuring sensor. The change in sensor type required a change in the associated surveillance methods. This, in turn, necessitates a change in the TS surveillance requirements to accurately reflect the new surveillance methodology required.

Proposed Change

The proposed amendment will result in a change in the method of operability verification required. The new instrumentation can be calibrated; whereas, the old instrumentation could only be functionally tested. This TS change request adds a requirement for a refueling interval calibration and deletes the separate requirement for a refueling interval functional test.

Basis

The AFW flow indication instrumentation installed originally was an ultrasonic flow indication system using a flow sensor clamped to the pipe wall. The compound used to transmit the flow signal from the pipe wall to the flow sensor was later found to be incompatible with the AFW maximum fluid temperatures. This compound would deform under these maximum temperatures to the extent that the acoustic signal was distorted, and the flow computer generated no output until the maximum flow rate was achieved. A contributing factor to the poor quality of the flow signal on the steam-driven AFW pump ultrasonic flow sensor was addressed in the internal AFW Safety System Functional Inspection (SSFI) completed in 1987. These flow sensors had been installed approximately two pipe diameters downstream of elbows and tees, which contributed to the data scatter and decreased accuracy of the existing installation at that time. Carolina Power & Light Company resolved these concerns by installing annubar flow sensors and differential pressure flow transmitters in the limited straight runs of piping in the existing system configuration. The flow indication system is also backed up by the steam generator level indicators, which are safety-related.

The newly installed flow sensing equipment is capable of being calibrated; whereas, the original ultrasonic flow sensing equipment was not. The new equipment, by virtue of its relocation, its ability to be calibrated, and its more direct ability to measure flow, provides a more accurate and reliable indication of flow to the steam generators. The function of the AFW flow indication is to provide sufficient information to an operator to allow for the recognition and isolation of faulted piping supplying AFW flow to a steam generator to assure continued cooling of the reactor coolant system.

The subject TS, Table 4.1-1, Item 33, requires a monthly channel check and a refueling interval functional test. The replacement instrumentation can be calibrated; whereas, the original ultrasonic flow instrumentation could not. The new instrumentation provides the same function as the old instrumentation, but with improved reliability and accuracy due to its relocation and ability to be calibrated. By definition (reference TS 1.6.2), "Calibration . . . shall be deemed to include the channel functional test." The AFW flow indication instrumentation will therefore effectively have one additional requirement, i.e., the calibration, applied to it. There can be no increase in the probability of an accident previously analyzed by introducing a required calibration of the affected instrumentation.

The function of the AFW flow indication instrumentation is to provide sufficient information to an operator to allow for the recognition and isolation of faulted piping supplying AFW flow to a steam generator to assure continued cooling of the reactor coolant system. Introducing a required calibration to this instrumentation, and thereby assuring more accurate and reliable indication, would not increase the consequences of any previously evaluated accident since the operator has better/improved information for assessment.

Since the AFW flow indication system does not interface with any system involved in an accident initiation sequence, the possibility of a new or different kind of accident cannot be created by introduction of a new required calibration of that system.

As can be seen by the above analysis, the improved reliability and accuracy of the subject instrumentation, as a result of its calibration, serves to improve the operator's ability to respond to AFW flow failure events. This potentially improved response to events would not decrease the margin of safety.

#### Conclusion

This change in the method of operability verification introduces a requirement for calibration in the TSs for the AFW flow indication system and would tend to enhance plant safety and reduce the consequences of certain plant events by providing an increase in accuracy and reliability for the AFW flow indication system.

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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

A change in the type of instrumentation used to monitor AFW flow resulted in a change in the method of operability verification required. The new instrumentation can be calibrated; whereas, the old instrumentation could only be functionally tested. This TS change adds a requirement for a refueling interval calibration and deletes the separate requirement for a refueling interval functional test.

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 because the proposed amendment only provides a means of calibration for this equipment. Since the AFW flow indication system provides the operator sufficient information to allow for the recognition and isolation of faulted AFW supply piping to the steam generators, the increase in accuracy and reliability of this indication resulting from its calibration would not involve a significant 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.

Since the AFW flow indication system does not interface with any system involved in an accident initiation sequence, the possibility of a new or different kind of accident cannot be created by introduction of a new required calibration of that system. 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 subject instrumentation calibration has no impact on accident sequences. The improved reliability and accuracy of the subject instrumentation, as a result of its calibration, serve to improve the operator's ability to respond to AFW flow failure events. This potentially improved response to events does not involve a significant reduction in a margin of safety.

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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 off-site, or (3) result in an 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

A change in the type of instrumentation used to monitor AFW flow resulted in a change in the method of operability verification required. The new instrumentation can be calibrated; whereas, the old instrumentation could only be functionally tested. This TS change adds a requirement for a refueling interval calibration and deletes the separate requirement for a refueling interval functional test.

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 off-site.

The additional calibration requirement for the AFW flow indication system does not involve activities with the potential to create effluent streams; therefore, the change does not result in a significant change in types or significant increase in amounts of effluents released off-site.



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

The equipment involved with this additional calibration requirement is outside of the plant's radiation control area. Performance of the calibration required by the proposed amendment will not result in increases in individual or cumulative occupational exposure.

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PAGE CHANGE INSTRUCTIONS

<u>Removed Page</u>	<u>Inserted Page</u>
4.1-8	4.1-8