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 FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light C 05000261
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 Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to License DPR-23, restricting
 allowable operation to power level of no more than 1380 Mwt
 unless three safety injection pumps available for automatic
 initiation to mitigate effect of LOCAs at 2300 Mwt. Fee paid.

See Tech Specs
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Carolina Power & Light Company

FEB 24 1988

SERIAL: NLS-88-044

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
EMERGENCY REQUEST FOR LICENSE AMENDMENT
SAFETY INJECTION SYSTEM

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 Operating License for the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2). The proposed amendment requests a Technical Specification change to restrict allowable operation to a power level of no more than 1380 megawatts thermal unless three safety injection (SI) pumps are available for automatic initiation to mitigate the effects of the spectrum of Loss of Coolant Accidents (LOCAs) at 2300 megawatts thermal. This amendment request is due to the identification of a scenario which would render two of the three safety injection pumps vulnerable to a single failure. This scenario was discussed in our letter dated February 12, 1988 as one which had not yet been resolved.

Attachment B to our February 12, 1988 letter identified a single failure scenario related to diesel generator voltage regulator failure and committed to advise you of our course of action to resolve this scenario. A modification disconnecting the select sequencer for the "B" SI pump thus preventing any one scenario from making two of the three pumps vulnerable to a single failure has been developed. This modification will ensure that two SI pumps (A&C) are capable of automatically starting with the third SI pump (B) becoming a manually operated pump, started and aligned by the operator if necessary. Routine monthly surveillance testing would continue to be conducted on all three pumps.

It has been determined by analysis that the small break LOCA is the limiting accident for the SI configuration above. A LOCA analysis was performed assuming only one SI pump available for accident mitigation and assuming operational parameters which would be allowed under the existing Technical

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Specifications. The analysis identified operation at 1380 megawatts (60 percent of rated power) as a power level at which one SI pump would be sufficient to mitigate the spectrum of analyzed LOCAs. Therefore, for operation with two SI pumps (A&C) capable of automatic initiation, it is possible to mitigate the effects of a postulated LOCA at power levels of up to 1380 megawatts assuming a single failure of one of the automatically initiated SI pumps. A copy of the analysis summary is included as Attachment B. Also attached is a Westinghouse Letter (CPL-88-513 dated 2/23/88) which describes the LOCA analysis performed in support of this amendment request (Attachment C).

Pursuant to our February 12, 1988 letter, a more detailed description of the modification, testing and training required by this new configuration is provided in Attachment D. This information is provided as the final response to the Confirmation of Action letter dated February 11, 1988 regarding an understanding of commitments made during a meeting made between the NRC and representatives of CP&L on February 10, 1988 at the NRC offices.

SIGNIFICANT HAZARDS ANALYSIS

Carolina Power & Light Company has reviewed the subject license amendment request in accordance with the standards set forth in 10CFR50.92 and determined that this change does not constitute a significant hazard based upon the following considerations:

- 1.a. Operation of the facility, in accordance with the proposed amendment, would not involve a significant increase in the probability of an accident previously analyzed because the SI system serves a mitigating function only after an accident event has been initiated. The probability of initiating any of the Chapter 15 accidents is unaffected by the availability of the SI pumps. Therefore, the probability of a previously analyzed accident has not been increased.
- 1.b. Operation of the facility, in accordance with the proposed amendment, would not involve a significant increase in the consequences of an accident previously analyzed because the change provides appropriate compensatory measures in the form of a power restriction to ensure that the SI system is capable of meeting its functional requirements (including single failure considerations). Therefore, the safety criteria are met and the consequences of any of these events are not significantly increased.
2. Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated because the operation of the SI pumps is solely a mitigating action in response to the previously analyzed accident scenarios. Therefore, the availability of the SI pumps has been addressed as a change to the existing accident analysis as reflected by a corresponding adjustment to maximum allowed power level.

3. Operation of the facility, in accordance with the proposed amendment, would not involve a significant reduction in a margin of safety because the analysis of reduced power operation has shown that postulated failures will not produce plant conditions which exceed the safety parameters specified in Chapter 15 of the UFSAR, 10CFR50.46, or Technical Specifications. Specifically:

- o Calculated peak fuel clad temperature remains below 2200°F.
- o Less than 1 percent of the total amount of Zircaloy in the core reacts chemically with water or steam.
- o Less than 17 percent of cladding is oxidized at any location.
- o The core geometry remains amenable to long-term cooling.

Since these criteria remain satisfied and in consideration of the safety margin built into the limits themselves, CP&L concludes that the margins of safety have not been significantly reduced.

ADMINISTRATIVE

Carolina Power & Light Company requests that this issue be handled as an emergency license amendment. The conditions of this request are consistent with 10CFR50.91(a)(5) in that the plant must remain shut down until this amendment is processed. During a review of the SI power and control logic (in response to an NRC request), several scenarios were identified which had existed since original plant license which could make the SI system vulnerable to a single failure. As the initial problems were being resolved, the present scenario was identified. Supporting analyses for this request were completed on February 23, 1988. Hence, emergency processing is appropriate.

It should be recognized that this is an interim action to return HBR2 to operation. Additional analyses are expected to be complete within approximately two weeks that should justify a slightly higher maximum allowed power level in the short term. In addition, efforts have been previously initiated to develop alternatives for longer term resolution and return to 100 percent power operation. Within sixty days following startup, CP&L will submit a detailed plan for the longer term actions. Should actions be deemed appropriate within the sixty days, notice of these actions along with the necessary supporting documentation will be coordinated through the NRR Project Manager.

The license pages reflecting the power restriction is provided for your use; changes are indicated by a single bar in the right margin.

In accordance with 10CFR170.12, a check in the amount of \$150 in payment of a license amendment application fee is enclosed.

If you have any questions concerning this request, please contact Mr. L. I. Loflin at (919) 836-6242.

Yours very truly,

M A McDuffie

M. A. McDuffie
Senior Vice President
Nuclear Generation

MAM/JSK/crs (5382JSK)

Enclosure

cc: Dr. J. Nelson Grace
Mr. R. Lo
Mr. L. Garner
Mr. Heyward G. Shealy (SC)
Attorney General (SC)

M. A. McDuffie, 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.

My commission expires: 11/27/89

Ruby R. Morgan
Notary (Seal)

