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 FACIL: 50-261 H. B. Robinson Plant, Unit 2, Carolina Power and Light 05000261  
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 CUTTER, A. B. Carolina Power & Light Co.  
 RECIP. NAME: RECIPIENT AFFILIATION  
 VARGA, S. A. Operating Reactors Branch 1

SUBJECT: Application for amend to License DPR-23, changing Tech Spec  
 graph Figure 3.10-3 re K(z) curve. Fee paid.

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Carolina Power & Light Company  
JUL 01 1985

SERIAL: NLS-85-225

Director of Nuclear Reactor Regulation  
Attention: Mr. Steven A. Varga, Chief  
Operating Reactors Branch No. 1  
Division of Licensing  
United States Nuclear Regulatory Commission  
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/LICENSE NO. DPR-23  
REQUEST FOR LICENSE AMENDMENT  
REVISED K(z) CURVE - TECHNICAL SPECIFICATION FIGURE 3.10-3

Dear Mr. Varga:

### SUMMARY

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 H. B. Robinson Steam Electric Plant, Unit 2 (HBR2). The change specifically addresses a change to the graph of "Normalized Axial Dependence Factor For  $F_q$  versus Elevation" as depicted in Figure 3.10-3 of the TS.

As previously agreed, the curve, along with a statement addressing the Significant Hazard Determination is being submitted at this time without the supporting calculation documentation. This approach has been taken in order to expedite the Significant Hazards notification procedure. Carolina Power & Light Company will followup this request with a transmittal of the supporting confirmatory calculations by October 1, 1985.

### SIGNIFICANT HAZARDS DETERMINATION

Carolina Power & Light Company has reviewed the subject TS change request in accordance with the standards set forth in 10CFR50.92 and guidance concerning application of this standard as supplied by example in the Federal Register on April 6, 1983 (48FR14870). The basis upon which the subject change has been determined to present No Significant Hazards Consideration is provided in the following discussion.

The proposed change is considered to be representative of the type of amendment referred to in example (vi) of aforementioned guidance (48FR14870). Specifically, this refers to "a change which either may result in some increase to the probability or consequences of a previously-analyzed accident or may reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the Standard Review Plan." The proposed change to the Technical Specification is directly related to this example in that the limits of 10CFR50.46 will continue to be satisfied with the change.

The proposed K(z) curve in conjunction with an  $F_q$  limit of 2.32 provides reasonable assurance of compliance with the limits of 10CFR50.46. Exxon Nuclear large break loss of coolant accident (LOCA) calculations for HBR2 predict a peak cladding temperature of 2042°F for a center peaked power shape with a maximum  $F_q$  of 2.32. The proposed

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K(z) axial distribution is identical to the previously accepted K(z) curve which was based on calculations performed by Westinghouse. Recent large break LOCA calculations submitted to the NRC by Exxon Nuclear for 14x14 and 15x15 fuel rod arrays demonstrated that the predicted Exxon Nuclear fuel peak cladding temperature was within  $\pm 50^{\circ}\text{F}$  of that for other fuel types similar to the Westinghouse 15x15 design.

The small break LOCA part of the K(z) curve will be based on the previously accepted Westinghouse analysis (WFLASH). Carolina Power & Light Company is participating in the WOG effort to resolve TMI Item IIK3.30 and IIK3.31 using the NOTRUMP Generic Analysis. This portion of the curve is primarily dependent on the system response and the linear heat rate and, therefore, the analysis is applicable.

Since: 1) the peak cladding temperature for Exxon Nuclear fuel should be within  $50^{\circ}\text{F}$  of the Westinghouse fuel peak cladding temperature, 2) for Exxon Nuclear fuel the peak cladding temperature is  $2042^{\circ}\text{F}$  for a center peaked power distribution at an  $F_q$  of 2.32, and 3) the previous small break LOCA analysis is applicable; we believe there is reasonable assurance that the 10CFR40.46 limit on peak cladding temperature of  $2200^{\circ}\text{F}$  will be met by Exxon Nuclear fuel with the proposed K(z) curve.

Because the application for the amendment involves a proposed change similar to the examples for which no significant hazards consideration exists, CP&L has made a proposed determination that the application involves no significant hazards consideration.

#### ADMINISTRATIVE

The revised version of the TS page affected by this request (Figure 3.10-3, page 3.10-22) is included as an enclosure for your use.

In accordance with 10CFR170.17, a check in the amount of \$150 in payment of a license amendment application fee is attached.

If you have any questions concerning this request, please contact Mr. S. R. Zimmerman at (919) 836-6242.

Yours very truly,



A. B. Cutter - Vice President  
Nuclear Engineering & Licensing

ABC/MDM/mf (1648NLU)

#### Enclosure

cc: Dr. J. Nelson Grace (NRC-RII)  
Mr. G. Requa (NRC)  
Mr. H. Krug (NRC Resident Inspector - RNP)  
Mr. Heyward G. Shealy (SC)  
Attorney General (SC)

A. B. Cutter, 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

  
Notary (Seal)

