REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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FACIL:50-261 H. B. Robinson Plant, Unit 2, Carolina Power and Ligh 05000261
AUTH.NAME AUTHOR AFFILIATION
UTLEY,E.E. Carolina Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
SCHWENCER,A. Operating Reactors Branch 1

SUBJECT: Responds to NRC 791029 ltr re rod position indication sys. Tech Specs require that control rods remain within 15 inches of bank positions. Intends to perform addl analysis to support present Tech Spec.

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Carolina Power & Light Company

December 14, 1979

FILE: NG-3514(R) SERIAL NO.: GD-79-3214

Office of Nuclear Reactor Regulation
Attention: Mr. Albert Schwencer, Chief
Operating Reactors Branch No. 1
United States Nuclear Regulatory Commission
Washington, D.C. 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
ROD POSITION INDICATION SYSTEM

Dear Mr. Schwencer:

In accordance with your letter of October 29, 1979, the Rod Position Indication (RPI) accuracy requirements contained within the H. B. Robinson Unit No. 2 Technical Specifications have been reviewed. The unit's Technical Specifications require that individual control rods remain within ± 24 steps (15 inches) of the bank positions, which differs from the ± 12 steps (7.5 inches) requirement contained within the Standard Technical Specifications (STS). As stated in your letter, the ± 12 step criteria in the STS is imposed due to the ± 12 step uncertainty in the Westinghouse RPI system. The system at H. B. Robinson has the same ± 12 step uncertainty. Carolina Power & Light Company (CP&L), however, believes the present Technical Specification to be adequate and intends to perform additional analysis to support the present requirement. In the interim, actions described below will be taken.

H. B. Robinson normally operates in an all rods out configuration. This mode of operation is significantly less sensitive to rod misalignment than rodded operation. The full power reactivity worths of the control rods at positions above 200 steps are sufficiently small such that a ± 24 step indicated misalignment from the rod bank would have no significant effect on the incore power distribution. Because of the inherent characteristics of the RPI instrument, the most accurate measure of misalignment available is the indicated rod misalignment with respect to the other indicated rod positions in a given bank. Therefore, for bank positions less than 200 steps, plant administrative procedures will be incorporated which will allow a ± 12 step (7.5 inches) RPI deviation from the average of the RPI indications for each bank without corrective action. If a deviation greater than 12 steps is detected, corrective action in accordance with the unit's Technical Specifications for a misaligned rod will be initiated. This procedure will be in place by January 30, 1980 and will satisfy concerns raised about the accuracy of the RPI system. The details of the analysis mentioned above are still being negotiated with our fuel vendor. When final arrangements are completed, CP&L will notify you of our schedule for supplying the results of the analysis. Should the analysis prove unsuccessful, CP&L will submit the indicated administrative procedure as a license amendment.

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411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

CP&L believes that the above mentioned actions adequately address the concerns raised in your letter. It should be pointed out, however, that it is our understanding from conversations with Westinghouse that the stated uncertainty of the system is not based on the unrecognized failure of a single coil. Rather, it is based on the overall system error. The coils contained within each coil stack are connected in series. Thus, if a given coil failed, the voltage output of the coil stack would become zero, and the plant operator would recognize the failure. The major portion of the RPI uncertainty is due to the non-linearity of the RPI indications which results in a relatively constant bias in all indications relative to the bank demand position. It is on this fact that the proposed administrative action is based. To impose the $\pm$ 12 step criterion on the deviation from indicated position to demand position would be overly restrictive since the rods could be perfectly aligned and yet be indicated to be at the Technical Specification limit.

Please contact our staff if you have any further questions regarding this matter.

Yours very truly,

E. E. Utley
Executive Vice President
Power Supply & Customer Services

JJS/jcb