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EISENHUT,D.G. Division of Licensing

SUBJECT: Suppl response to Generic Ltr 83-10D re automatic trip of reactor coolant pumps (RCP).RCP trip criterion being adopted permits RCP operation to continue during most non-LOCAs.

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Carolina Power & Light Company

SERIAL: LAP-83-589

JAN 16 1984

Mr. Darrell G. Eisenhut, Director
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
SUPPLEMENTAL RESPONSE TO GENERIC LETTER NO. 83-10d
AUTOMATIC TRIP OF REACTOR COOLANT PUMPS

Dear Mr. Eisenhut:

SUMMARY

Carolina Power & Light Company's (CP&L) previous letter dated April 22, 1983 presented the plan for demonstrating compliance with the criteria for resolution of TMI Action Plan Item II.K.3.5 which were established in letters from Mr. Darrel G. Eisenhut of the Nuclear Regulatory Commission to all Applicants and Licensees with Westinghouse designed Nuclear Steam Supply Systems (Generic Letters 83-10c and d) dated February 8, 1983. This letter presents the status of the planned responses to NRC Generic Letter 83-10d for the H. B. Robinson Steam Electric Plant Unit No. 2 (HBR2). The date by which all parts of the program are to be completed by the Westinghouse Owners' Group (WOG), of which CP&L is a member, has now been revised to March 1, 1984. However, a submittal to partially fulfill the requirements has been transmitted to you by WOG letter OG-110, dated December 1, 1983 (Sheppard to Mattson).

DETAILS

Section I of the attachment to NRC Letters 83-10c and d is concerned with "Pump Operation Criteria Which Can Result in RCP Trip During Transients and Accidents." Subsection 1 of Section I presents guidelines for establishing setpoints for RCP Trip. The WOG response to this section of NRC Letters 83-10c and d will be contained in Revision 1 to the Emergency Response Guidelines (ERG). As discussed in CP&L's April 15, 1983 and August 10, 1983 letters, the HBR2 plant specific Emergency Operating Procedures (EOP) will be revised to include Revision 1 to the Westinghouse ERGs. The upgraded EOPs will be implemented by the end of the Steam Generator Replacement Outage which is currently scheduled to begin in July 1984.

The RCP Trip Criterion being adopted in the HBR2 specific procedures not only assures RCP trip for all losses of primary coolant for which trip is considered necessary, but also permits RCP operation to continue during most non-LOCA accidents, including steam generator tube rupture events up to the design basis double-ended tube rupture. The generic applicability of the RCP

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trip criterion selected has been documented by the Westinghouse Owners' Group in "Evaluation of Alternate RCP Trip Criteria," September 1983, which as stated above has been submitted to the NRC for review.

Subsection 2 of Section I of the attachment to NRC Letters 83-10c and d provides guidance for justification of manual RCP trip. Subsection 2a requires that compliance with 10 CFR 50.46 be demonstrated in an Appendix K small break LOCA analysis given that the RCPs are tripped 2 minutes after the onset of reactor conditions corresponding to the RCP trip setpoint. Westinghouse has completed generic verification for the WOG that predicted LOCA transients presuming the 2 minute delayed RCP trip are nearly identical to those presented in Safety Analysis Reports utilizing the WFLASH Evaluation Model. Thus, the Safety Analysis Reports for all plants are a valid means to demonstrate compliance with the Subsection 2A guidelines.

Westinghouse is now performing better estimate WFLASH analyses to demonstrate, generically, compliance with the guidelines presented in Subsection 2A of Section I of the attachment to NRC Generic Letters 83-10c and d. These analyses will identify the minimum time available for operator action for a range of break sizes such that the ECCS acceptance criteria of 10 CFR 50.46 are not exceeded. Combined with the Subsection 2A justification, this will justify manual RCP trip for all plants. Carolina Power & Light Company will report on the applicability of the WOG report to HBR2 three months after the receipt of the report from the WOG.

The WOG intends to submit the generic report justifying manual RCP trip by March 1, 1984. This will complete the documentation comprising a generic reply to NRC Generic Letters 83-10c and d.

Subsection 3A of Section I of the attachment to NRC Generic Letter 83-10d requested information concerning the instrumentation that will signal the need for RCP trip. Carolina Power & Light Company has chosen to use the reactor coolant subcooling methodology. Detailed information concerning the core cooling monitors at HBR2 was included in our letters dated March 31, 1981 and April 26, 1983. Please reference also the December 1, 1983 WOG letter (OG-110) which discusses the reactor coolant subcooling methodology in detail.

If you have any questions on this subject, please contact a member of the Nuclear Licensing Staff.

Yours very truly,

A. B. Cutter
Vice President
Nuclear Engineering & Licensing

ONH/ccc (9168ONH)

cc: Mr. J. P. O'Reilly (NRC-RII)
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