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

SUBJECT: Responds to 840822 request for addl info re 840530  
 confirmatory calculations for high energy line break  
 analysis outside containment.

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Carolina Power & Light Company

SERIAL: NLS-84-385

SEP 07 1984

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  
HIGH ENERGY LINE BREAK

Dear Mr. Varga:

SUMMARY

By letter dated May 30, 1984, Carolina Power & Light Company (CP&L) submitted confirmatory calculations for the high energy line break analysis outside of containment for the H. B. Robinson Steam Electric Plant Unit No. 2 (HBR2). In a telephone conference call on August 22, 1984, Mr. John Ridgeley of the Auxiliary Systems Branch requested additional information. The purpose of this letter is to document the additional information provided during the call.

DETAILS

Attachment 2 to CP&L's May 30, 1984 letter provided the information on pressure and temperature profiles for pipe breaks outside containment previously requested by your staff. Item 3.e lists assumptions used for the leakage rate. The air flow out (leakage rate) used by the Contempt LT-28 computer code is defined by the equation:  $Q = K(\Delta P)$ , as stated in Item 3.e. Mr. Ridgeley requested the values used by CP&L for the flow area and the leakage coefficient (K). The area of the doorway of the compartment (21 ft<sup>2</sup>) was used as the flow area since the door may be open during operation. The value used for the leakage coefficient was  $K = 1.17 \times 10^7 \frac{\text{ft}^3}{\text{hr}} \cdot \frac{\text{in}^2}{\text{lbf}}$ .

If you have any further questions on this subject, please contact Mr. Stephen D. Floyd at (919) 836-6901.

Yours very truly,

S. R. Zimmerman  
Manager

Nuclear Licensing Section

ONH/ccc (522ONH)

cc: Mr. J. P. O'Reilly (NRC-RII)  
Mr. G. Requa (NRC)  
Mr. J. Ridgeley (NRC)  
NRC Resident Inspector (RNP)

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