DEC 1 0 1984

Docket No.: 50-400

Mr. E. E. Utley, Executive Vice President
Power Supply & Engineering & Construction
Carolina Power and Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Dear Mr. Utley:

Subject: Request for Additional Information - Shearon Harris, Unit 1

A generic deficiency relating to the omission of the consideration of superheat in the main steam line break analysis for Westinghouse plants has been identified. To conform with the criteria of Standard Review Plan Section 3.6.1, "Plant Design for Protection Against Postulated Failure in Fluid Systems Outside Containment," we request that you conduct an analysis for Shearon Harris, Unit 1 which will include the consideration of possible superheat in the calculation. Please respond to the enclosed request for additional information within 90 days of receipt of this letter.

Sincerely,

ORIGINAL SIGNED BY

George W. Knighton, Chief
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Enclosure:
As stated

cc: See next page

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QUESTION CONCERNING STEAM LINE BREAK ANALYSIS
WHEN CONSIDERING SUPERHEAT

Calculate conditions within the compartment containing the three main steam isolation valves that can result from a main steam line break, taking into account the possible occurrence of superheat conditions. Provide the results of that calculation including the following parametric information with regard to that break (Items 1-4, below):

1. With respect to the pipe to be broken, we need to know the:
   a. Type of fluid (water or steam);
   b. Temperature;
   c. Pressure;
   d. Source of the fluid;
   e. Flow rate (or assumed flow rate) versus time; and
   f. Enthalpy versus time

2. With respect to the compartment being analyzed;
   a. Number of compartments analyzed;
   b. For each compartment, including contiguous compartments:
      i. initial temperature
      ii. initial pressure
      iii. initial humidity
      iv. total floor area and floor space occupied by equipment (square feet)
      v. number of vents and vent areas (square feet) for each vent; and
      vi. compartment wall height (feet) and
   c. Simple compartment and interconnection diagram.

3. All assumptions used, including but not limited to the:
   a. Orifice coefficient;
   b. Fluid expansion factor;
   c. Heat transfer coefficient for heat through the walls; and
   d. Single active failures that were considered in the analysis

4. Utilities analysis results:
   a. Temperature versue time curve (peak temperature specified);
   b. Pressure versus time curve (peak pressure specified); and
   c. Humidity versus time curve (peak humidity specified)