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DUKE POWER

April 8, 1992

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Subject: Catawba Nuclear Station, Units 1 & 2  
Docket Nos 50-413 and 50-414  
NRC Bulletin 88-11 "Pressurizer Surge Line Stratification"  
NRC TAC NOS. M72121/M72122

In a letter dated March 17, 1992 the NRC Staff requested that Duke Power provide a response regarding whether the results of the specific Catawba pressurizer transients described in Licensee Event Reports (LERs) 413/90-22, 413/90-25 and 414/90-12 were adequately accounted for in Catawba's response to NRC Bulletin 88-11. Based on a conversation with the NRC Staff on April 2, 1992, an additional pressurizer transient associated with LER 413/90-13 was also reviewed. This transient event occurred on June 11, 1990 on Catawba Unit 1 and involved a violation of Technical Specification 3.4.9.2 (limiting heatup/cooldown rates for the pressurizer).

The analysis of the surge line has been reviewed for each of the above LER transient events. First, a comparison was made between each LER transient event and the original design basis transients for the surge line. The worst case thermal transient associated with each LER was determined by using a potential through wall temperature shock of the surge line equivalent to the temperature difference between the pressurizer and the Reactor Coolant System (RCS). This transient was then compared against the original design transients for the surge line as specified by Westinghouse document SSDC 1.3, Revision 1, and modified by Westinghouse letter DUKE 3534. All of the LER transient events were found to be bounded by a temperature difference between the RCS and the pressurizer of 240°F which is less than the 250°F temperature difference assumed in the original design transients. By comparing the observed temperature differences and the related temperature/time rates to the design transients on the surge line, each event was conservatively classified as an original design transient (i.e. heatup/cooldown transient H4).

Next, a comparison was made between the design basis transients and the updated thermal stratification transients. Through correspondences with Westinghouse, the updated design transients as defined in WCAP-12639 (Westinghouse Owners Group Pressurizer Surge Line Thermal Stratification Detailed Analysis) were verified to envelop the original design transients.

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Through this transitive process, the LER events listed above have been taken into consideration in the updated thermal stratification transients. Therefore, Duke has concluded that the results of the above LERs were adequately accounted for in Catawba's response to Bulletin 88-11.

Very truly yours,

A handwritten signature in dark ink, appearing to read "M. S. Tuckman", with a long horizontal flourish extending to the right.

M. S. Tuckman

CRL/BUL8811.492

xc: S. D. Ebnetter  
Regional Administrator, Region II

R. E. Martin, ONRR

W. T. Orders  
Senior Resident Inspector