DUKE POWER COMPANY
POWER BUILDING
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WILLIAM O. PARKER, JR.
VICE PRESIDENT
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TELEPHONE: AREA 704
373-4083

April 19, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: McGuire Nuclear Station
Docket No. 50-369
Proposed Amendment to License NPF-9 submitted March 2, 1982

Dear Mr. Denton:

In a telecon with Mr. G. A. Copp (DPC/Licensing) on March 29, 1982, Mr. Vince Leung (NRC/Reactor Systems Branch) indicated that the Staff had several questions regarding our proposed Technical Specification change reducing boron concentration in the boron injection tank from a nominal 20,000 ppm to 2000 ppm (submitted by my letter dated March 2, 1982).

Attached is the requested information which was provided to us by Westinghouse. We request that approval of the proposed amendment be completed as soon as possible. Should you have any questions concerning the information, please advise.

Very truly yours,

William O. Parker, Jr.

PBN/jfw
Attachment

cc: Mr. P. R. Bemis
Senior Resident Inspector
McGuire Nuclear Station

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

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DUKE POWER COMPANY
McGUIRE NUCLEAR STATION

RESPONSE TO NRC QUESTIONS - BIT BORON CONCENTRATION REDUCTION

Question 1: Verify that releases are within 10CFR-20 limits. Should this be 10CFR-100? (p. 1, Attachment 1A).

Response: Since it was demonstrated that there is no fuel damage as a result of the accidental depressurization of the main steam system, the releases set forth in 10CFR-20 as limits could not be violated.

Question 2: What is the minimum DNBR value for accidental depressurization of the secondary transient?

Response: Historically, DNBR vs time plots have never been presented in Chapter 15 of the FSAR. Main steamline depressurization is a condition II event, and consequently must meet the radiological dose release requirements of 10CFR-20 which states that no fuel damage is permitted to occur.

Based on the calculated results presented in the Chapter 15 BIT reduction amendment, it was shown that no fuel damage was found to occur and thus the dose requirement is met. This is shown by the fact the DNBR remained above the limit value.

The evaluation of the DNBR for this accident is done on a statepoint basis. The DNBR is not calculated during the transient calculations, nor is it calculated using the code (LOFTRAN) which calculated the transient.

Based on previous results, the minimum DNBR has been found to occur near the point of maximum return to power, therefore, only a few statepoints need to be evaluated in the range of the peak heat flux. The statepoints evaluated show the same general trend as the plot of DNBR vs time in WCAP-9226, the Steamline Break Topical Report. As shown in the topical, only for a small power range does the DNBR approach a minimum value. For all other times the DNBR >> 1.3. Therefore, an evaluation of a large number of statepoints is not necessary and it is sufficient to state that the DNBR remains above the limit value.

Question 3: What is the initial value of DNBR for [illegible] inadvertant ECCS actuation? (p. 15.2-40, 15.2.14.3)

Response: 1.62

Question 4: What is the minimum DNBR value for the main steamline break transient? (p. 15.4-10)

Response: Main Steamline Break is a Condition IV event, and consequently must meet the radiological dose release requirements of 10CFR-100 which states that limited fuel damage is permitted to occur.

(Remainder of answer is the same as Response to Question 2).