



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381

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Site Vice President  
Watts Bar Nuclear Plant

DEC 02 1992

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

Gentlemen:

In the Matter of the Application of ) Docket Nos. 50-390  
Tennessee Valley Authority ) 50-391

WATTS BAR NUCLEAR PLANT (WBN) - UNITS 1 AND 2 - RESPONSE TO STAFF'S REQUEST FOR ADDITIONAL INFORMATION - VOLUME CONTROL TANK

Reference: TVA letter from W. J. Museler to USNRC Document Control Desk dated September 8, 1992, "Proposed Alternative to the Materials Requirements of Section III, Subsections NC/ND Paragraph 7153 of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code"

During a teleconference on November 5, 1992, NRC requested that TVA respond to three questions related to the scenario TVA postulated in the referenced letter: Closure of both stop valves in the relief lines from the volume control tank to the holdup tanks; and, the simultaneous failure of the two volume control tank level control circuits resulting in closure of the volume control tank outlet valves, while the volume control tank continues to fill from the Chemical and Volume Control System letdown line. This condition if not corrected by the operator based on alarms and indicators would allow the volume control tank to continue to fill.

1. What is the maximum pressure coming into the volume control tank?
2. What is the safety margin of the volume control tank before it would rupture?
3. What effect would the rupture of the volume control tank have on other safety-related equipment in the area?

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RESPONSE

Item 1.

The relief valve located in the letdown line downstream of the letdown orifices feeding into the volume control tank is set at 600 psig.

Item 2

The volume control tank has a design pressure of 75 psig and has been tested to 1.5 times this design pressure. Therefore, this is the safety margin. If the postulated scenario described were to occur, it is assumed the tank would rupture.

Item 3

Based on a field inspection and a review of the compartmentation drawing for the concrete room containing the volume control tank, the room only contains the subject tank, associated piping, and supports. There are no components located within the volume control tank area that perform a design basis accident mitigation function. A rupture of the volume control tank would not impact the plant's ability to mitigate a design basis accident. The volume control tank would be isolated and the refueling water storage tank would be used to supply water to cool the reactor core during accident conditions.

Should there be any questions regarding this information, please telephone P. L. Pace at (615) 365-1824.

Very truly yours,



William J. Museler

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