



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

May 19, 2008

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop: OWFN P1-35
Washington, D.C. 20555-0001

Gentlemen:

In the Matter of)
Tennessee Valley Authority)

Docket No. 50-391

WATTS BAR NUCLEAR PLANT (WBN) - UNIT 2 - REQUEST FOR ADDITIONAL INFORMATION REGARDING RESPONSE TO GENERIC LETTER 2004-02, POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY RECIRCULATION DURING DESIGN BASIS ACCIDENTS AT PRESSURIZED WATER REACTORS (TAC NO. MD6726)

- References:
1. NRC letter dated March 31, 2008, "Watts Bar Nuclear Plant, Unit 2 – Request for Additional Information Regarding Generic Letter 2004-02, Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors (TAC NO. MD6726)"
 2. TVA letter dated September 7, 2007, "Watts Bar Nuclear Plant (WBN) – Unit 2 – Initial Responses to Bulletins and Generic Letters"

The purpose of this letter is to respond to an NRC request for additional information (Reference 1) regarding the WBN Unit 2 steam generator coating. TVA's original response to the Generic Letter was submitted on September 7, 2007 (Reference 2).

The WBN Unit 2 steam generators are Westinghouse Model D3 generators. They are of the same design as the original WBN Unit 1 steam generators that were in service from May 1996 until September 2006. The WBN Unit 2 steam generators have never been in service.

Enclosure 1 provides the NRC request and TVA's response. Enclosure 2 provides the listing of open actions required for licensing made in Enclosure 1.

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I declare under penalty of perjury that the foregoing is true and correct. Executed on the 19th day of May, 2008.

If you have any questions, please contact me at (423) 365-2351.

Sincerely,


Masoud Bajestani
Watts Bar Unit 2 Vice President

Enclosures

cc (Enclosures):

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Enclosure 1:
**Response to NRC Request for Additional Information Regarding Generic
Letter 2004-02, Potential Impact of Debris Blockage on Emergency
Recirculation During Design Basis Accidents at Pressurized Water
Reactors**

NRC Question: *In its response for GL 2004-02, TVA indicates that the WBN 2 steam generators (SGs) are coated. Describe the coating material on the SGs, and state whether the coating material is qualified for design-basis accident conditions. Also, does TVA intend to leave the coating on the SGs?*

TVA Answer: The SGs are coated with Carboline™ 4674. In the final WBN Unit 2 configuration, the Carboline™ 4674 coating is underneath Reflective Metal Insulation (RMI). This coating is recommended for the protection of the exterior of equipment with elevated temperature steel surfaces. Carboline™ 4674 is a high temperature silicone that is not design basis accident qualified and is assumed to fail if the RMI that encapsulates it fails.

For WBN Unit 1, TVA performed an analysis to predict the type, quantity, and size distribution of debris that would be generated should a high energy line break requiring recirculation through the emergency sump ever occur at Watts Bar Unit 1. The analysis was submitted as part of the WBN Unit 1 closure for Generic Letter 2004-02 (Reference 1). The configuration analyzed in the TVA's Watts Bar Reactor Building GSI-191 Debris Generation Calculation (ALION-CAL-TVA-2739-03) for WBN Unit 1 is the same as WBN Unit 2 (RMI with Carboline™ 4674 coating underneath). In this calculation, four cases were postulated for breaks in the crossover leg piping at the base of each of the SGs. These breaks are considered to be bounding for all loss of coolant accidents that could be postulated for WBN.

In Reference 2, TVA committed to install new sump strainers on WBN Unit 2 identical to those installed on WBN Unit 1. TVA's commitment in Reference 2 will ensure that the debris generation analysis discussed above is applicable to WBN Unit 2. As part of the WBN Unit 2 modification, TVA will perform the necessary containment walkdowns and analysis to confirm that the debris generation study, debris transport analysis, chemical effects analysis, and downstream effects analysis apply to the WBN Unit 2 conditions.

As the Carboline™ 4674 coating is a relatively small source of debris, TVA intends to leave the Carboline™ 4674 coating on the WBN Unit 2 SGs.

TVA will provide a closure document similar to Reference 1 for WBN Unit 2 prior to fuel load.

References:

1. TVA letter dated March 31, 2008, "Watts Bar Nuclear Plant (WBN) Unit 1 - Supplemental Response to Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2004-02, Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors (PWR) - Notice of Completion (TAC NO. MC4730)"
2. TVA letter dated September 7, 2007, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Initial Responses to Bulletins and Generic Letters"

Enclosure 2:
Open Actions Required for Licensing

1. TVA will provide a closure document similar to Reference 1 for WBN Unit 2 GL 2004-02 prior to fuel load.