

September 30, 2005

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 - SUMMARY OF TELECONFERENCE REGARDING POTENTIAL RELAXATION FROM THE FEBRUARY 11, 2008, IMPLEMENTATION DEADLINE OF ORDER EA-03-009 "INTERIM INSPECTION REQUIREMENTS FOR REACTOR PRESSURE VESSEL HEADS AT PRESSURIZED WATER REACTORS"

Dear Mr. Singer:

On September 12, 2005, a teleconference was held between the Tennessee Valley Authority (the licensee) and the U.S. Nuclear Regulatory Commission (NRC) regarding the licensee's long-term plans to request relaxation from the requirements of Order EA-03-009 for the Watts Bar Nuclear Plant (WBN), Unit 1. The Order, which resulted, in part, from the discovery of leaks and nozzle cracking at the Davis-Besse Nuclear Power Station, was issued on February 11, 2003, and established interim inspection requirements for reactor pressure vessel (RPV) heads at pressurized water reactors.

Within 5 years of the date of the Order, plants identified in the low susceptibility category by the Order (i.e., WBN), were required to perform either (1) ultrasonic testing of each RPV head penetration nozzle (i.e., nozzle base material) from 2 inches above the J-groove weld to the bottom of the nozzle and an assessment to determine if leakage has occurred into the interference fit zone, or (2) eddy current testing or dye penetrant testing of the wetted surface of each J-groove weld and RPV head penetration nozzle base material to at least 2 inches above the J-groove weld. This inspection is in addition to the bare metal visual examination of 100 percent of the RPV head surface (including 360 degrees around each RPV head penetration nozzle) that has already been completed at WBN.

The licensee informed the NRC staff of their preference to defer the above RPV head inspection from their Cycle 7 outage, which is scheduled for the fall 2006, to their Cycle 8 outage, which is scheduled for the spring 2008. The decision is due to the already large number of people that will be on the refueling floor and inside containment during the Cycle 7 outage to assist in replacement of the steam generators. Scheduling the RPV head inspections during the Cycle 7 outage would entail an additional 5 days of critical time and an estimated 18 rem dose to plant personnel.

The licensee proposes to begin the Cycle 8 outage prior to the 5-year deadline of the Order (i.e., February 11, 2008). However, since the required inspection will not have been completed by this date in accordance with the Order, TVA will need approval of a relaxation to the Order that will allow them to conduct the examination of the RPV head after February 11, 2008, but prior to startup from the Cycle 8 outage.

The NRC staff did not identify any specific concerns to the licensee's proposed approach, provided that the licensee submit an application requesting relaxation from the Order and propose regulatory commitments to (1) shut down the WBN facility in advance of the 5-year deadline of the Order and (2) perform the required inspections prior to restart following the Cycle 8 outage. The licensee stated their preference to obtain NRC staff approval of this approach prior to the Cycle 7 outage. While the NRC staff did not object to this proposed schedule, it was noted that there are no regulatory requirements to obtain staff approval prior to the Cycle 7 outage. As an alternative, the NRC staff suggested that the licensee consider waiting until the end of the Cycle 7 outage to determine whether to submit the relaxation request. In the event that the Cycle 7 outage is protracted, the licensee might conclude it is beneficial to perform the RPV head inspections at that time, rather than shutting down by February 11, 2008, which could result in an abbreviated Cycle 8.

The NRC staff emphasizes that continued power operation beyond February 10, 2008, without having performed the required nonvisual nondestructive examination of Order EA-03-009, will not be acceptable regardless of circumstances involving an extended Cycle 7 outage time or other extenuating circumstances.

If you have any questions regarding the above summary, please contact me at 301-415-1364.

Sincerely,

*/RA/*

Douglas V. Pickett, Senior Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-390

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