

Mike Skaggs
Site Vice President, Watts Bar Nuclear Plant

EA-03-009

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

In the Matter of) Docket No. 50-390
Tennessee Valley authority)

Pursuant to 10 CFR 50.55a(a)(3)(i) and NRC Order EA-03-009 Section IV.F, TVA is requesting relief from NRC Order EA-03-009, Paragraph IV.C.3 schedule requirements. The request for relief is associated with the schedule for performing the nonvisual nondestructive examinations of the reactor pressure vessel head surface penetration nozzles required in Paragraph IV.C(5)(b) at least once prior to February 11, 2008. TVA has determined that an alternative schedule is needed for that specific examination because of the impacts the Order's schedule would otherwise have on WBN's long-planned steam generator replacement project in Cycle 7 Refueling Outage in the Fall 2006. TVA's intent to submit an alternate schedule was discussed with NRC in a teleconference call on September 12, 2005.

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A listing of regulatory commitments is provided in Enclosure 2. If you have any questions concerning this matter, please call P. L. Pace at (423) 365-1824.

Sincerely,

A handwritten signature in black ink, appearing to read 'M Skaggs', with a stylized flourish at the end.

Mike Skaggs

Enclosures

cc (Enclosures):

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ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT UNIT 1
FIRST 10-YEAR INTERVAL
REQUEST FOR RELIEF TO NRC ORDER EA-03-009

I. Summary:

The NRC Order EA-03-009 issued on February 11, 2003, as revised on February 20, 2004, established interim inspection requirements for reactor pressure vessel (RPV) heads at pressurized water reactors. One of the requirements is to complete a nonvisual nondestructive examination of the RPV head penetrations by February 11, 2008. In response to the revised Order, TVA notified NRC in a March 11, 2004, letter that a firm schedule for completing the nonvisual nondestructive examination had yet to be determined due to the process of planning a steam generator replacement project. The letter also stated that WBN would submit appropriate schedule relief in accordance with the Order requirements if relief was needed. It has been determined schedule relief is needed.

During the Cycle 7 Refueling Outage scheduled for the Fall of 2006, WBN will be replacing all four of the Unit 1 steam generators. This project will involve a considerable amount of work in the Unit 1 Containment Building. Scheduling the RPV nonvisual nondestructive examination during this outage will increase general area dose rates to the supplemental steam generator replacement (SGR) personnel, increase critical path time to the outage, and increase the possibility of damage to the head and associated control rod drive assemblies while on the head stand due to the overhead work associated with the SGR project. It is planned to "store" the RPV head on the vessel with the reactor cavity missile shields reinstalled during the SGR project. As a result, the nonvisual nondestructive examination of the RPV head penetrations cannot be performed during this configuration.

In accordance with Paragraph IV.F of the Order, WBN is requesting relief from the schedule requirement to complete the nonvisual nondestructive examination by February 11, 2008. In the alternative, however, WBN plans to shut down on or before February 10, 2008, for the Cycle 8 Refueling Outage, and perform the nonvisual nondestructive examination prior to restarting the unit. WBN is also proposing to perform the bare metal visual inspection required by Paragraph IV.C(5)(a) of the Order in the Cycle 7 Refueling Outage. This visual inspection was performed in accordance with the Order requirements in the Cycle 5 Refueling Outage and no indication of leakage was reported.

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This proposed alternative schedule is submitted in accordance with Paragraph IV.F of the Order and 10 CFR 50.55a (a)(3)(i). The proposed alternative discussed above and the low susceptibility ranking of the WBN head as calculated by the Order, provide an acceptable level of quality and safety. TVA is requesting NRC's review and approval of this alternative schedule by mid-August 2006 to ensure that TVA can adequately plan for Cycle 7 outage activities.

II. System/Component(s) for Which Relief is Requested:

Reactor Pressure Vessel Closure Head Penetration Welds

III. Code Requirement:

NRC Revised Order EA-03-009, Paragraph IV.C.(3) states:

"The requirements of paragraph IV.C.(5)(b) must be completed at least once prior to February 11, 2008, and thereafter, at least every 4 refueling outages or every 7 years, whichever occurs first."

IV. Code Requirements from Which Relief Is Requested:

Relief is requested from the schedule requirement of completing the inspection prior to February 11, 2008 as required by Paragraph IV.C.(3) of the Order.

V. Basis for Relief:

Licensees proposing to deviate from the requirements of the Order are allowed to seek relaxation in accordance with the requirements of Paragraph IV.F. In response to issuance of the revised Order, WBN responded in the March 11, 2004 letter:

"WBN is in the process of planning and scheduling a considerable amount of work in Unit 1 containment associated with steam generator replacement project. Until that planning and scheduling process is complete, WBN is unable to develop a firm schedule for completing the nonvisual nondestructive examination of the RPV head penetrations addressed in Paragraph IV.C.(3) of the Order. Should WBN require any schedule relief, TVA will submit an appropriate relief request in accordance with Paragraph IV.F of the Order and 10 CFR 50.55a(a)(3)."

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VI. Alternative Examinations:

WBN proposes to:

- (1) Perform the bare metal visual examination of 100 percent of the RPV head surface as required by Paragraph IV.C.(5)(a) of the Order during the Cycle 7 Refueling Outage in Fall of 2006. Successive bare metal visual examinations will be scheduled in accordance to the requirements of Paragraph IV.C.(3) of the Order.
- (2) Shut down the unit on or before February 10, 2008, for Cycle 8 Refueling Outage, and perform the nonvisual nondestructive examination in accordance with the requirements of Paragraph IV.C.(5)(b) of the Order prior to restarting the unit.

VII. Justification for the Granting of Relief:

In response to the revised Order, TVA notified NRC in a March 11, 2004 letter that a firm schedule for completing the nonvisual nondestructive examination had yet to be determined due to the process of planning the replacement of the four Unit 1 steam generators. The letter also stated WBN would submit appropriate schedule relief in accordance with the Order requirements if relief was needed.

The nonvisual nondestructive examination is normally performed during the core empty period with the head set on a modified head stand. The modified head stand is required to elevate the head in the stored position to allow the inspection tool to be placed under the head. The location of the WBN head stand is in a critical work path for SGR upper containment work scope and will have a significant impact to the project. The SGR project will involve a considerable amount of work in the Unit 1 Containment Building. Scheduling the RPV nonvisual nondestructive examination during this outage will increase general area dose rates to the supplemental SGR personnel, increase critical path time to the outage, and increase the possibility of damage to the head and associated control rod drive assemblies while on the head stand due to the overhead work associated with the SGR project. It is planned to "store" the RPV head on the vessel with the reactor cavity missile shields reinstalled during the SGR project. The nonvisual nondestructive examination of the RPV head penetrations cannot be performed during this configuration.

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As noted in the referenced response letter, WBN is a low susceptibility plant as defined by the Order. WBN will not exceed the NRC established threshold of low susceptibility for the current licensed life of the plant primarily due to the low operating head temperature.

WBN performed the bare metal visual examination of the reactor vessel head surface described in Paragraph IV.C(5)(a) of the Order during the Cycle 5 Refueling Outage in September 2003. No leakage was reported. The inspection results were provided to NRC by letter dated December 10, 2003. As required by Paragraph IV.C(3) of the Order, this examination must be completed at least every third refueling outage or every 5 years, (i.e. by the WBN Cycle 8 refueling outage); however, WBN proposes to perform this bare metal visual examination during the Cycle 7 Refueling Outage scheduled for Fall of 2006. Successive bare metal visual examinations will be scheduled in accordance with Paragraph IV.C(3).

WBN plans to shut down Unit 1 from operation on or before February 10, 2008. The nonvisual nondestructive examination of the closure head will be performed in accordance with Paragraph IV.(5)(b) of the Order prior to restarting the unit.

Based on information discussed above and the proposed action of placing the unit in a safe shutdown mode prior to February 11, 2008, an acceptable level of quality and safety is achieved. Therefore, WBN submits this proposed alternative in accordance with 10 CFR 50.55a(a)(3)(i) and requests relief be authorized.

VIII. Implementation Schedule:

WBN plans to shut down Unit 1 on or before February 10, 2008 for the Cycle 8 Refueling Outage and will perform the nonvisual nondestructive examination in accordance with the requirements of Paragraph IV.C.(5)(b) of the Order prior to restarting the unit.

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT UNIT 1
FIRST 10-YEAR INTERVAL
REQUEST FOR RELIEF TO NRC ORDER EA-03-009
LIST OF COMMITMENTS

1. WBN will perform the bare metal visual examination of 100 percent of the RPV head surface as required by Paragraph IV.C.(5)(a) during the Cycle 7 Refueling Outage in Fall of 2006.
2. WBN will perform the nonvisual nondestructive examination in accordance with the requirements of Paragraph IV.C.(5)(b) of the Order prior to restarting the unit from the Cycle 8 Refueling Outage.