



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

AUG 05 1998

TVA-WBN-TS-98-008

10 CFR 50.90

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

Gentlemen:

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

**WATTS BAR NUCLEAR PLANT (WBN) - UNIT 1 - TECHNICAL
SPECIFICATION (TS) CHANGE NO. 98-008 - COLD OVERPRESSURE
MITIGATION SYSTEM (COMS) OPERATION IN MODE 4**

In accordance with the provisions of 10 CFR 50.90, TVA is submitting a request for an amendment to WBN's license NPF-90 to change the TS for Unit 1. The proposed amendment would revise the Watts Bar Nuclear Plant (WBN) TS and associated TS Bases to allow up to 4 hours to make the Residual Heat Removal (RHR) suction relief valve available as a COMS relief path. This condition will be applicable when entering Mode 4 from Mode 3 during a plant shutdown.

TVA has determined that there are no significant hazards considerations associated with the proposed change and that the change is exempt from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9). The WBN Plant Operations Review Committee and the WBN Nuclear Safety Review Board have reviewed this proposed change and determined that operation of WBN Unit 1 in accordance with the proposed change will not endanger the health and safety of the public.

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Enclosure 1 to this letter provides the description and evaluation of the proposed change including TVA's determination that the proposed change does not involve a significant hazards consideration, and is exempt from environmental review. Enclosure 2 contains copies of the appropriate TS pages from Unit 1 marked-up to show the proposed change. Enclosure 3 forwards the revised TS pages for Unit 1 which incorporate the proposed change.

TVA requests that NRC approval be approximately 30 days prior to beginning WBN's refueling outage currently scheduled for early 1999, and that the revised TS be made effective within 30 days of NRC approval.

In accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and enclosures to the Tennessee State Department of Public Health.

If you have any questions about this change, please contact me at (423) 365-1824.

Sincerely,



P. L. Pace
Licensing and Industry Affairs Manager

Enclosures

cc: See page 3

Subscribed and sworn to before me
on this 5th day of August, 1998.

E. Jeannette Long
Notary Public

My Commission Expires June 27, 2001

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cc (Enclosures):

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ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT (WBN)
UNIT 1
DOCKET NO. 50-390

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TS-98-008
DESCRIPTION AND EVALUATION OF THE PROPOSED CHANGE

I. DESCRIPTION OF THE PROPOSED CHANGE

This amendment proposes a revision to the Watts Bar Nuclear Plant (WBN) TS and associated TS Bases to allow up to 4 hours to make the Residual Heat Removal (RHR) suction relief valve available as a Cold Overpressure Mitigation (COMS) relief path. This condition will be applicable when entering Mode 4 from Mode 3 during a plant shutdown. Specifically, the proposed change modifies the Applicability statement for Limiting Condition for Operation (LCO) 3.4.12, COMS, to add a note allowing the 4 hour time frame to establish the availability of the RHR relief path. The Applicability statement for LCO 3.4.12 would be revised to add the following note:

4. *For the purposes of making the RHR suction relief valve operable, up to 4 hours is permitted after entering Mode 4 from Mode 3.*

In addition, Note 1 would be administratively clarified to reference Notes 2, 3, and 4, as follows:

1. While this LCO is not met, entry into the Applicability of the LCO is not permitted, except as allowed by Notes 2, 3, and 4 below.

The proposed changes are illustrated in an annotated version of the TS and TS Bases for LCO 3.4.12 provided in Enclosure 2.

II. REASON FOR THE PROPOSED CHANGE

LCO 3.4.12 requires a COMS system to be operable in Modes 4 and 5, and Mode 6 when the reactor vessel head is on. Three relief path options are provided:

1. Two power operated relief valves (PORVs) with lift settings within the limits specified in the PTLR.
2. One PORV with a lift setting within the limits specified in the PTLR and the RHR suction relief valve with a setpoint ≥ 436.5 psig and ≤ 463.5 psig.
3. The RCS depressurized and an RCS vent capable of relieving > 475 gpm water flow.

II. REASON FOR THE PROPOSED CHANGE (continued)

Normally, two pressurizer PORVs would be utilized to satisfy the operability requirements during a change from Mode 3 to Mode 4. However, conditions can arise during a plant cooldown from Mode 3 to 4 where a PORV or its associated block valve may be inoperable. For this situation, option 2, one operable PORV and the RHR suction relief valve, would provide the required RCS relief path. However, Note 1 of the Applicability statement for LCO 3.4.12 states that, "while this LCO is not met, entry into the Applicability of the LCO is not permitted." This note inadvertently precludes use of Option 2 since the RHR suction valves and the relief valve, may not be placed in service until Mode 4 is achieved. Also, when only one PORV relief path is available, a Technical Specification action which requires a plant shutdown to a mode below Mode 3 could not be complied with until the second PORV relief path was operable because of Note 1.

During development of the WBN MERITS TS prior to initial licensing, Note 1 of the Applicability statement had been inserted to ensure COMS operability since LCO 3.0.4 does not apply to the WBN TS when reducing power. This WBN convention is more restrictive than the current industry practice. Among Westinghouse plants, the conversion to MERITS TS typically has resulted in adoption of LCO 3.0.4 requirements that apply for both increases and decreases in power, and an exception that LCO 3.0.4 does not apply to the COMS specification. Therefore, as discussed herein, the proposed TS request removes the over-restrictive aspect of Note 1 with regard to the RHR suction relief valve and makes LCO 3.4.12 more consistent with industry practice. The addition of the proposed note in the Applicability statement for LCO 3.4.12 provides the time required to perform functions such as alignment of the RHR system and the warming of the system to proper operating temperatures.

III. SAFETY ANALYSIS

The pressurizer power operated relief valves (PORVs), together with additional actuation logic from the wide range pressure channels, are utilized to mitigate potential Reactor Coolant System (RCS) overpressure transients which might occur at low temperatures. The COMS provides the relief capacity for specific transients and thereby maintains RCS pressure below the limits determined by 10 CFR 50 Appendix G requirements.

The function of the COMS actuation logic is to monitor both the RCS temperature and pressure whenever the temperature is below about 350°F. During a plant cooldown, the COMS is manually armed prior to the temperature of the RCS decreasing below 350°F. At certain temperatures encountered

III. SAFETY ANALYSIS (continued)

during Modes 4, 5 and 6, the RHR system is operated for decay heat removal and low pressure letdown control. Therefore, the RHR suction isolation valves are open in the piping from the RCS hot leg to the inlet header of the RHR pumps. While these valves are open, the RHR suction relief valve is exposed to the RCS and is able to relieve pressure transients in the RCS. The RHR suction relief valve setpoint is between 436.5 psig and 463.5 psig. The valve has a relief capacity of 480 gpm at 350°F and will therefore, pass flow greater than the 475 gpm required for a COMS transient.

In Mode 4 with one required RCS relief valve inoperable, the RCS relief valve must be restored in accordance with Action E.1 of LCO 3.4.12 to an operable status within a completion time of 7 days. Two RCS relief valves are required to provide low temperature overpressure mitigation while withstanding a single failure of an active component.

The 7 day completion time considers the facts that only one of the RCS relief valves is required to mitigate an overpressure transient and that the likelihood of an active failure of the remaining valve path concurrent with an overpressurization event during this time period is very low. Therefore, the proposed TS change does not increase the probability of an accident previously evaluated. Further, this change does not result in hardware or procedural changes which will affect the probability of the occurrence of an accident. Considering this, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

IV. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

TVA has concluded that operation of Watts Bar Nuclear Plant (WBN) Unit 1 in accordance with the proposed change to the technical specifications does not involve a significant hazards consideration. TVA's conclusion is based on its evaluation, in accordance with 10 CFR 50.91(a)(1), of the three standards set forth in 10 CFR 50.92(c).

- A. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The 4 hour allowance to place the RHR relief valve in service in the proposed TS change is bounded by the current COMS TS. The COMS TS currently allows cooldown of the unit while in Mode 4 with only one operable

IV. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION
(continued)

relief path for up to 7 days. Operation in this condition is allowed by Action E.1 of LCO 3.4.12. The 7 day completion time considers the facts that only one of the RCS relief valves is required to mitigate an overpressure transient and that the likelihood of an active failure of the remaining relief path during this 7 day time period is very low. Thus a failure of the single available relief path concurrent with an overpressurization event during the proposed 4 hour time period for alignment and preparation of the RHR system for service is more remote. Therefore, the proposed TS change does not increase the probability of an accident previously evaluated. Further, this change does not result in hardware or procedural changes which will affect the probability of the occurrence of an accident. Considering this, the proposed amendment proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- B. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Action E.1 of LCO 3.4.12 addresses a condition where one relief path is inoperable while in Mode 4. The completion time for Action E.1 is 7 days. The 4 hour period of operation in Mode 4 that will be allowed by the addition of Note 4 to the Applicability statement of LCO 3.4.12 is well within the bounds of the analysis for operation allowed by Action E.1. This 4 hour time allowance for placement of the RHR suction relief valve in service therefore, does not cause the initiation of any accident nor create any new creditable limiting failure for safety-related systems and components. Since the 4 hour period is only a fraction of the 7 day time period previously authorized for operation with only a single relief path, it is not probable that an accident different from those previously evaluated will be created. Therefore, the change has no adverse effect on the ability of the safety-related systems to perform their intended safety functions.

IV. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION
(continued)

- C. The proposed amendment does not involve a significant reduction in a margin of safety.

The Technical Specifications currently allow one of the two required relief valves to be unavailable for 7 days (Condition E of LCO 3.4.12) while in Mode 4. In this condition (one of the two relief valves inoperable), the proposed change would permit a mode change from Mode 3 to Mode 4 while providing 4 hours to place the RHR system into service. Consequently, this change does not reduce the margin of safety since the probability of an event occurring during the 4 hour period is less than the probability of an event occurring during the 7 days permitted by Action E.1. Considering this, the proposed change does not significantly reduce the margin of safety.

V. ENVIRONMENTAL IMPACT CONSIDERATION

The proposed change does not involve a significant hazards consideration, a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or a significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.