



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

DEC 17 1999

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 - REQUEST FOR ADDITIONAL  
INFORMATION - TS CHANGE NO. 99-004, POTENTIAL MAIN STEAM SYSTEM  
OVERPRESSURIZATION CONDITION (TAC NO. MA6045)

The purpose of this letter is to provide a response to the NRC Staff's October 28, 1999, letter which requests additional information for the subject proposed TS change, submitted by TVA to NRC on June 25, 1999. TVA's proposed license amendment request would change the Main Steam Safety Valve (MSSV) TS (Section 3.7.1) to address a potential main steam system overpressure condition identified by WBN's nuclear steam supply system vendor, Westinghouse Electric Corporation. TVA's proposed amendment is based on a generic change to NUREG-1431 (Westinghouse Standard Technical Specifications), TSTF-235, R1 which has been approved by NRC.

NRC's RAI requests an explanation for "deviations" identified by NRC between TVA's proposed TS change and TSTF-235, R1. TVA notes that the differences arise due to WBN having already implemented portions of the TSTF-235 within the approved WBN TS prior to licensing, thereby desiring to minimize changes. In addition, TVA does not consider some of the staff's observations to be deviations. It is our understanding that information contained in standard technical specification "Reviewer Notes" is provided to document NRC approved methods but does not require incorporation within TS applications. TVA's response to the Staff's questions is provided in the enclosure. Our review of these items finds them to be acceptable as proposed; therefore, no additional changes are provided.

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

Sincerely,



P. L. Pace, Manager  
Nuclear Licensing and Industry Affairs

Enclosure

cc (Enclosure):

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ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - RESPONSE TO NRC REQUEST FOR  
ADDITIONAL INFORMATION - TS CHANGE NO. 99-004 (TAC NO. MA6045)

NRC QUESTION 1 - Uncertainties for One Inoperable MSSV on One or  
More Steam Generators

Watts Bar Nuclear Plant (WBN) Technical Specification (TS) page B 3.7-4 reflects the addition of TSTF 235, Revision 1, insert B 3.7-3A, second paragraph, with the exception of the phrase "...with an appropriate allowance for calorimetric power uncertainty." Tennessee Valley Authority's (TVA's) response also did not adopt the sentence at the bottom of TSTF 235's page Insert B3.7-3A which addresses the magnitude of this uncertainty. Please respond to these concerns, including how this uncertainty is accommodated for Watts Bar.

**TVA RESPONSE NO. 1:**

As noted in the Staff's Question No. 4 below, TVA's proposed change to the WBN Unit 1 Technical Specifications (TS), Section 3.7.1 (MSSVs) has two statements which appear on page B 3.7-4 and Insert D as follows: "The values in Specification 3.7.1 include an allowance for instrument and channel uncertainties to the allowable RTP obtained with this algorithm." These statements pertain to the values specified in the proposed TS for reduced reactor power level (percent RTP) and reduced reactor trip setpoints, respectively, required of Actions A.1, B.1, and B.2, and do include an allowance for calorimetric power uncertainty. These uncertainty statements were simply retained from the current TS Bases (Section 3.7.1) which contains the same statement.

The difference from TVA's proposed TS and TSTF-235, Revision 1 arises primarily due to WBN having already addressed a portion of the TSTF (TSTF-235 R1, Item 1, which concerns the power reduction heat balance algorithm per NSAL-94-001 and IN-94-60), during WBN Unit 1 licensing, prior to the existence of the TSTF. In WBN's current TS, the uncertainty statement addresses the uncertainty associated with the reduced reactor power level (percent RTP) and equates to 6% instrument and channel uncertainty including 2% for calorimetric power uncertainty. Since the statement remains valid for the proposed TS Actions A.1 and B.1, it was retained. This same 6% value for uncertainty was also applied to the calculation for the reduced reactor trip setpoints proposed in Action B.2, and,

therefore, the same uncertainty statement is retained in the TS Bases for Action B.2. The sentence at the bottom of TSTF-235, R1, which addresses the magnitude of the uncertainty is included within a "Reviewers Note." Such notes are included within standard TS for information or reference but are typically not incorporated within the TS or TS Bases. Therefore, since the current WBN TS were approved and issued without specifying the magnitude of the uncertainty, the proposed WBN TS change maintained that format.

**NRC QUESTION 2 - Calculation of Heat Removal for remaining MSSVs**

WBN TS page B3.7-4 reflects the definition of the term  $w_s$  with the exception of the phrase "...at the highest OPERABLE MSSV opening pressure, including tolerance and accumulation, as appropriate..." Please respond regarding how this uncertainty on the MSSV flow rate capability will be accommodated for Watts Bar.

**TVA RESPONSE NO. 2:**

The WBN term  $w_s$  is calculated in the same manner as defined in TSTF-235 R1, namely, "...at the highest OPERABLE MSSV opening pressure, including tolerance and accumulation, as appropriate..." As discussed in response to NRC Question No. 1, TVA had already addressed the heat balance algorithm prior to licensing WBN Unit 1. Under that licensing effort, the WBN TS Bases (Page B 3.7-4) provided the same heat balance algorithm which was subsequently included within the Reviewers Note of TSTF-235 R1, with minor nomenclature variations. Since the proposed WBN TS changes do not affect that portion of the current TS Bases, no further changes are considered necessary.

**NRC QUESTION 3 - Uncertainties for Multiple Inoperable MSSVs on One or more Steam Generators**

WBN TS page B3.7-4, Insert D, reflects TSTF 235 Insert B3.7-3A, Items B.1 and B.2, with the exception of the phrase "...with an appropriate allowance for Nuclear Instrumentation System trip channel uncertainties." Note that the Reviewer's Note in TSTF 235 refers to a representative value of 9% rated thermal power (RTP) to account for nuclear instrumentation system trip channel uncertainties. Please respond to this concern including how this uncertainty (and its value) is accommodated for Watts Bar.

**TVA RESPONSE NO. 3:**

As detailed in response to NRC Question 1, the uncertainty statement in the current TS which addresses the reduced reactor power level (percent RTP) has been retained for Actions A.1 and B.1 of the proposed TS. This uncertainty statement is also valid for the reduced reactor trip setpoints proposed in Action B.2, and has therefore been retained. The uncertainty in each case equates to 6% instrument and channel uncertainty including 2% for calorimetric power uncertainty.

**NRC QUESTION 4 - TVA Uncertainty Statement**

It is not clear which of the above uncertainties are addressed by TVA's two statements which appear on page B 3.7-4 and Insert D as follows: "The values in Specification 3.7.1 include an allowance for instrument and channel uncertainties to the allowable RTP obtained with this algorithm."

**TVA RESPONSE NO. 4:**

As discussed in response to NRC Questions 1 and 3, the uncertainty value of 6% instrument and channel uncertainty, including 2% for calorimetric uncertainty, applies to both the reduced reactor power level (percent RTP) required by Actions A.1 and B.1 and the reduced reactor trip setpoints required by Action B.2.

**NRC QUESTION 5 - Balanced Valves**

Please confirm, as previously indicated orally, that TSTF Surveillance Requirement 3.7.1.1, Item e, is not included for WBN on the basis that WBN does not utilize balanced valves.

**TVA RESPONSE NO. 5:**

The proposed WBN TS change is consistent with TSTF-235 R1 for this item. With the exception of an editorial change which WBN adopted, TSTF-235 R1 does not address any other changes to the Bases for SR 3.7.1.1. TVA notes that the WOG Standard TS Bases, Revision 1 (utilized for the TSTF-235 markup), includes SR 3.7.1.1, Item "e" which requires verification of balancing device integrity on balanced MSSVs. That requirement does not exist within the current WBN TS since the WBN MSSVs are of the conventional type, discharging to atmosphere, not balanced valves. Therefore, since TSTF-235 did not address balanced valves and WBN does not utilize them for MSSVs, no changes are necessary.