



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

WBN-TS-04-20

10 CFR 50.90  
10 CFR 50.91(a)(6)

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 WBN-TS-04-20 - REACTOR COOLANT TEMPERATURE  
INDICATOR INOPERABLE - SUPPLEMENT TO EXIGENT AMENDMENT

Pursuant to 10 CFR 50.90 and 10 CFR 50.91(a)(6), TVA submitted on October 29, 2004, an Exigent Technical Specification (TS) Change to License NPF-90 for WBN Unit 1. The proposed Exigent TS change will provide a one time change to Function 4a, "Reactor Coolant System (RCS) Hot Leg Temperature Indication," of TS Table 3.3.4-1. The request is necessary because TVA discovered on October 21, 2004, that Temperature Indicator (TI), 1-TI-68-65C, was not operable. This device provides indication in the Auxiliary Control Room (ACR) for the hot leg temperature of RCS Loop 4.

TVA discussed the amendment request with the NRC staff in a conference call held on November 3, 2004. The discussion focused on the functions defined in TS Table 3.3.4-1 and the actions TVA intends to take to ensure that the operating staff

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U.S. Nuclear Regulatory Commission  
Page 2

is aware of the inoperable temperature loop and the impact the loss of indication will have on the shutdown of the unit from the ACR. Based on this discussion, TVA agreed to document the planned actions in a supplement to the October 29<sup>th</sup> amendment request.

Provided in the enclosure is the requested supplemental information. This letter contains no new regulatory commitments. Should there be any questions about this proposed change, please contact me at (423) 365-1824.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 5<sup>th</sup> day of November 2004.

Sincerely,



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

Enclosure

Proposed Technical Specification Change Number  
WBN-TS-04-20 - Supplemental Information

cc: See page 3

U.S. Nuclear Regulatory Commission  
Page 3

Enclosure

cc (Enclosure):

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## ENCLOSURE

### TENNESSEE VALLEY AUTHORITY WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 DOCKET NUMBER 390

#### Proposed Technical Specification Change Number WBN-TS-04-20 - Supplemental Information

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#### 1.0 BACKGROUND

Pursuant to 10 CFR 50.90 and 10 CFR 50.91(a)(6), TVA submitted on October 29, 2004, an Exigent Technical Specification (TS) Change to License NPF-90 for WBN Unit 1. The proposed Exigent TS change will provide a one time change to Function 4a, "Reactor Coolant System (RCS) Hot Leg Temperature Indication," of TS Table 3.3.4-1. The request is necessary because TVA discovered on October 21, 2004, that Temperature Indicator (TI), 1-TI-68-65C, was not operable. This device provides indication in the Auxiliary Control Room (ACR) for the hot leg temperature of RCS Loop.

TVA discussed the amendment request with the NRC staff in a conference call held on November 3, 2004. The discussion focused on the functions defined in TS Table 3.3.4-1 and the actions TVA intends to take to ensure that the operating staff is aware of the inoperable temperature loop and the impact the loss of indication will have on the shutdown of the unit from the ACR. Based on this discussion, TVA agreed to document the planned actions in a supplement to the October 29<sup>th</sup> amendment request.

#### 2.0 SUPPLEMENTAL INFORMATION

##### NRC Question 1:

The following paragraph was provided in Section 4.0, "Technical Analysis," of TVA's amendment request dated October 29, 2004:

"The basis for continued operation with the RCS Loop 4 hot leg temperature indicator inoperable is acceptable because this parameter is only one of five parameters used to ensure decay heat removal via the Steam Generators (SGs). The other parameters will be available in the ACR during the remainder of Cycle 6. Relaxing the requirement for one loop of T(hot) indication while maintaining the

requirements for the remaining three loops of T(hot) indication, AFW Controls, SG Pressure indication and control, SG level indication, AFW flow indication and SG T(sat) indication will not adversely affect the unit's ability to remove decay heat. If the operable three loops are consistent relative to T(hot), SG T(sat) and SG level and the other parameters for the inoperable loop are not contradictory to plant conditions indicated by the operable loops (i.e., SG level and SG T(sat) for loop 4), then it is reasonable to consider that Loop 4 is performing its function to remove decay heat via its SG."

During the discussion on November 3, 2004, NRC requested a clarification of the intent of this information and whether the only instrumentation that is currently affected is the temperature indicator for Loop 4.

**TVA Response:**

The intent of the above paragraph was to identify the various parameters available to Operations staff in the ACR. The only ACR instruments affected by the problem encountered on Loop 4 are Temperature Indicator (TI), 1-TI-68-65C and Temperature Recorder (XR), 1-XR-68-3C. As indicated below, individual TIs are provided in the ACR for each of the other three RCS hot legs:

RCS Hot Leg Loop:	TI Number:
1	1-TI-68-1C
2	1-TI-68-24C
3	1-TI-68-43C

The recorder is a four pen recorder and only the pen associated with Loop 4 is impacted by the instrumentation problem. The TIs for Loops 1, 2 and 3 in conjunction with the various other parameters discussed in the paragraph above, provide adequate information to the Operations staff for all four loops to ensure the unit is shutdown and that the unit is being adequately cooled. As indicated in TVA's amendment request, additional details are provided on the functions required for remote shutdown in Section 7.4, "Systems Required for Safe Shutdown," of the Updated Final Safety Analysis Report (UFSAR).

**NRC Question 2:**

Until the Loop 4 instrumentation is repaired in the Cycle 6 refueling outage, what actions will be required if another remote shutdown instrument fails.

### TVA Response:

Required Action A of TS 3.3.4, "Remote Shutdown System," must be entered for the failure of any instrument listed in Table 3.3.4-1, "Remote Shutdown System Instrumentation and Controls." Action A requires that the affected instrument be restored within 30 days or the unit must be shutdown in accordance with Action B.

For the indication parameters listed in Table 3.3.4-1, only the instrumentation associated with Function 4.a, "RCS Hot Leg Temperature Indication," is located inside the Polar Crane wall. The instrumentation for the other indication parameters may be repaired during unit operation. Should the temperature indicator for another hot leg loop fail while the Loop 4 indicator is inoperable, TVA will evaluate the impact of the inoperable components in accordance with the TVA Corrective Action Program. The evaluation will provide site management with the necessary information to decide if the unit must be shutdown to implement the needed repairs or whether adequate remote shutdown information is available to the operating staff for safe operation of unit. Any decision to continue plant operation beyond the 30 day allowed outage time (AOT) will require NRC approval under a license amendment.

### NRC Question 3:

Clarify the actions that will be taken to ensure the Operations staff is aware of the inoperable RCS hot leg temperature instruments and the impact to plant operation caused by the failure.

### TVA Response:

Once amendment request WBN-TS-04-20 is approved by NRC, the requirements of Standard Department Procedure NADP-6, "Technical Specifications/Licenses and Amendments," will be followed for the implementation of the amendment. This procedure requires that prior to implementing the amendment, reviews must be performed to identify the procedures impacted by the changes to the TS. This review also requires that potential impacts to the Operator training program be identified. Currently, the actions addressed in the following discussion are planned.

The procedures affected by the proposed amendment include:

- Abnormal Operating Instructions (AOI) 27, "Main Control Room Inaccessibility."
- AOI-30.2, "Fire Safe Shutdown."
- Surveillance Instruction (SI), 1-SI-0-4, "Monthly Surveillances."

A discussion of the AOIs is provided in Section 4.0, "Technical Analysis," of TVA's amendment request dated October 29, 2004. 1-SI-0-4 implements the monthly channel check required by Surveillance Requirement (SR) 3.3.4.1 for the Loop 4 RCS hot leg instrumentation.

Upon approval of the requested amendment, revisions to the above procedures will be implemented. The AOI revisions will clarify that the Loop 4 indicator and the Loop 4 input to the recorder are inoperable and that the other parameters available in the ACR should be used in conjunction with the parameters available for Loop 4 to establish that adequate cooling is available. The SI revision will indicate that the channel check is not required since the Loop 4 instruments are inoperable. In addition to this, the inoperable instruments in the ACR will be clearly marked with a caution order.

Additional actions are planned to ensure the Operations staff is fully aware of the impact of the inoperable instrumentation. These actions include covering the instrumentation problem in the current regualification training cycle. This training will include:

1. A review of TS 3.3.4, and the changes proposed by the amendment request.
2. A review of the AOI revisions.
3. A review of guidance for control room abandonment and natural circulation cooling.

Other actions that will be implemented include the release of a "Night Order" and the tracking of the inoperable equipment in the "Limiting Condition for Operation (LCO) Tracking" process. Night Orders are required reading for licensed operators. The LCO tracking program will track the failed instrument until the repairs are completed.