



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

FEB 26 1996

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) - PROPOSED LICENSE AMENDMENT,
AUXILIARY FEEDWATER PUMP SUCTION TRANSFER ON LOW SUCTION PRESSURE
(TS 96-003) (TAC NO M94815)

In accordance with 10 CFR 50.90, the Tennessee Valley Authority (TVA) requests that Appendix A of Facility Operating License NPF-90, Watts Bar Unit 1 Technical Specifications, be amended to revise the requirements for auxiliary feedwater pump suction transfer on low suction pressure. This amendment is required to allow implementation of a physical plant modification to preclude premature alignment to the emergency supply of water from the Essential Raw Cooling Water System when the Condensate Storage Tank is still available.

As discussed with the NRC staff on February 23, 1996, the proposed amendment is needed to resume operation of Watts Bar Unit 1. Therefore, in accordance with 10 CFR 50.91, TVA requests NRC review and approval of the proposed amendment on an emergency basis in order to implement the required design change, and restart the unit. Restart is currently scheduled for February 29, 1996. The basis for the emergency is discussed in Enclosure 1.

A description of the proposed amendment, and the bases for it, is included in Enclosure 1. TVA's analysis of the issue of no significant hazards consideration, as required by 10 CFR 50.91(a),

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is included in Enclosure 2. Proposed revised technical specification pages are included in Enclosure 3.

The proposed amendment has been reviewed by the Watts Bar Plant Operations Review Committee. The TVA Nuclear Safety Review Board review is being conducted in parallel with the NRC review, and will be completed prior to implementation of the license amendment.

In accordance with 10 CFR 50.91(b)(1), a copy of this proposed license amendment is being forwarded to the State Designee for the State of Tennessee.

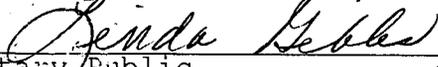
Enclosure (4) lists the commitment made in this letter.

If you should have any questions, please contact John Vorees at (423) 365-8819.

Sincerely,


Bruce S. Schofield
Licensing Manager

Sworn to and subscribed before me
this 26 day of February, 1996



Notary Public
My Commission Expires 4-21-1999

Enclosures
cc: See page 3

ENCLOSURE 1

PROPOSED LICENSE AMENDMENT - AFW PUMP SUCTION TRANSFER ON LOW SUCTION PRESSURE

I. Description of Proposed License Amendment

The proposed amendment would revise the Watts Bar Unit 1 Technical Specification (TS) requirements for auxiliary feedwater pump suction transfer on low suction pressure. This amendment is required to allow implementation of a physical plant modification to preclude premature alignment to the emergency supply of water from the Essential Raw Cooling Water (ERCW) System when the Condensate Storage Tank (CST) is still available. The proposed modification would utilize the motor driven auxiliary feedwater pump (MDAFWP) pressure switches for both the MDAWP and the turbine driven auxiliary feedwater pump (TDAFWP) ERCW valves. In the current design, three pressure switches are located in each MDAFWP suction line from the CST and two sets of three pressure switches are located in the TDAFWP suction line.

Specifically, TS Table 3.3.2-1, Function 6.f, would be revised to read "Auxiliary Feedwater Pumps Train A and B Suction Transfer on Suction Pressure - Low." Function 6.g would be deleted. The proposed changes would make the Watts Bar Unit 1 Technical Specifications consistent with NUREG-1431, "Standard Technical Specifications Westinghouse Plants."

Technical Specification basis B 3.3.2 would be revised to reflect the proposed changes.

II. Basis for Proposed License Amendment

The Auxiliary Feedwater System (AFW) supplies feedwater to the steam generators (SG) in the event of a loss of main feedwater (MFW) to remove reactor decay heat and avoid Reactor Coolant System overpressurization. The preferred water source for the AFW pumps is the Condensate Storage Tank (CST). ERCW is available as an alternate source (which serves as the ultimate heat sink) when the CST is not available. A separate ERCW header is provided for each of the MDAFWPs 1A-A & 1 B-B; the TDAFWP can receive water from either header. Two motor operated valves (MOVs) are provided in each suction line. Transfer to the ERCW is automatically initiated on low pressure (2-out-of-3 logic with time delay) in the AFW pumps suction lines. In the current design, three pressure switches are located in each MDAFWP suction line from the CST and two sets of three pressure switches are located in the TDAFWP suction line.

A turbine trip event at approximately 15 percent power on February 20, 1996, resulted in the start of all AFW pumps. During recovery, with the MDAFWPs at low flow and the CST available, the TDAFWP supply was transferred to ERCW Train A (both 1-FCV-3-136A & 136B opened on low pressure). This spurious operation of the pressure switches was caused by pressure oscillations in the CST header

resulting from low flow operation of the MDAFWPs. The MDAFWPs did not transfer to ERCW.

To prevent recurrence, the facility will be modified to abandon the TDAFWP pressure switches in place, and use the MDAFWP pressure switches to detect loss of CST and initiate transfer of both MDAFWP and TDAFWP supply to ERCW. Redundancy and electrical separation will be maintained (ie., Train A switches will operate Train A MOVs, Train B switches will operate Train B MOVs). The setpoints of the MDAFWP pressure switches will remain unchanged. The setpoints of the MDAFWP pressure switches are adequate to ensure TDAFWP minimum net positive suction head requirements are satisfied. Sufficient suction head and flow to the pumps during transfer to ERCW will continue to be provided for pump protection.

A Failure Modes and Effects Analysis for the proposed change did not identify any new failure modes. The modification does not introduce any new components or components of a different type which could create a different failure mode.

The proposed modification does not affect the ability of the AFW to provide required flows within the time limits assumed in the accident analysis for design basis events and anticipated operational transients.

III. Emergency Circumstances

During previous testing of the MDAFWPs and the TDAFWP in mini-flow, pressure oscillations occurred, but the logic which opens the ERCW valves was not satisfied. In the February 20, 1996 event, the TDAFWP was at full flow and the MDAFWPs were operating at 40 - 120 gpm. The suction pressure response was more pronounced at these conditions than during previous testing and operation, resulting in the spurious operation of the pressure switches and the alignment of the TDAFWP suction to ERCW. Emergency circumstances exist, as provided for in 10 CFR 50.91(a)(5). TVA could not have foreseen this problem, and has not failed to make timely application for this amendment. The amendment is required for resumption of operation of Watts Bar Unit 1.

IV. Environmental Consideration

The proposed changes do 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). Pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed changes is not required.

ENCLOSURE 2

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

I. Description of Proposed License Amendment

The proposed amendment would revise the Watts Bar Unit 1 TS requirements for auxiliary feedwater pump suction transfer on low suction pressure. This amendment is required to allow implementation of a physical plant modification to preclude premature alignment to the emergency supply of water from the ERCW System when the CST is still available. The proposed modification would utilize the MDAFWP pressure switches for both the MDAFWP and the TDAFWP ERCW valves. In the current design, three pressure switches are located in each MDAFWP suction line from the CST and two sets of three pressure switches are located in the TDAFWP suction line.

Specifically, TS Table 3.3.2-1, Function 6.f, would be revised to read "Auxiliary Feedwater Pumps Train A and B Suction Transfer on Suction Pressure - Low." Function 6.g would be deleted. The proposed changes would make the Watts Bar Unit 1 Technical Specifications consistent with NUREG-1431, "Standard Technical Specifications Westinghouse Plants."

Technical Specification basis B 3.3.2 would be revised to reflect the proposed changes.

II. Basis for No Significant Hazards Consideration Determination

The Nuclear Regulatory Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92 (c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Each standard is discussed below for the proposed amendment.

- (1) Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change will maintain the automatic transfer to the emergency water supply (ERCW) while avoiding spurious transfers when the preferred source of water (CST) is available. Redundancy and electrical separation will be maintained. Sufficient NPSH will continue to be provided to the TDAFWP during the swapper to ERCW. The ability of the AFW system to provide required flows within the time limits

assumed in the accident analysis for design basis events and anticipated operational transients is not affected. Therefore the proposed change would not involve a significant increase in the probability or consequences of an accident previously evaluated.

- (2) Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change will maintain the automatic transfer to the emergency water supply (ERCW) while avoiding spurious transfers when the preferred source of water (CST) is available. Redundancy and electrical separation will be maintained. Sufficient NPSH will continue to be provided to the TDAFWP during the swapover to ERCW. The ability of the AFW system to provide required flows within the time limits assumed in the accident analysis for design basis events and anticipated operational transients is not affected. No additional components or components of a different type which could create a different failure mode were added. Therefore, the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

- (3) Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

The ability of the AFW system to provide required flows within the time limits assumed in the accident analysis for design basis events and anticipated operational transients is not affected, therefore operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

III. Summary

Based on the above analysis, TVA has determined that operation of Watts Bar in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety; therefore, operation of Watts Bar in accordance with the proposed amendment would not involve a significant hazards consideration as defined in 10 CFR 50.92.