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Subject: Watts Bar Unit 2 - Draft Request for Additional Information Re: Exigent Amendment Request for Inoperable Reactor Coolant Temperature Indication
Date: Friday, January 12, 2018 2:32:46 PM

By letter dated Jan 10, 2018, the Tennessee Valley Authority (TVA) submitted a license amendment request under exigent circumstances for a one time change to Table 3.3.4-1, Function 4a, "RCS Hot Leg Temperature Indication," of the Watts Bar Nuclear Plant, Unit 2, Technical Specifications (TSs). The purpose of the change is to permit the temperature indicator in the alternate control room for reactor coolant system (RCS) Loop 3, only relied upon in the event of a main control room evacuation, to be inoperable for the remainder of the current Unit 2 operating cycle. TVA indicated that to return the temperature indicator to operability would either involve significant challenges to plant staff attempting to repair the components while the plant remains at power, or a shutdown to Mode 3, 4 or 5.

The U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information, as described in the below request for additional information (RAI), is required for the staff to complete its review of the subject request.

This RAI is identified as draft at this time to confirm your understanding of the information that the NRC staff needs to complete the evaluation. If the request for information is understood, please respond to this RAI within 5 days of the date of this request in order to enable the staff to complete its review in accordance with TVA's requested schedule. Please call me at 301-415-6020 if you would like to set up a conference call to clarify this request for information or to discuss an alternative schedule for TVA's response.

Regards,

Robert G. Schaaf

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REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST TO MODIFY

TECHNICAL SPECIFICATION 3.3.4, "REMOTE SHUTDOWN SYSTEM"

TENNESSEE VALLEY AUTHORITY

WATTS BAR NUCLEAR PLANT, UNIT 2

DOCKET NUMBER 50-391

Regulatory Basis

The Nuclear Regulatory Commission's (NRC's) requirements related to the content of the TSs are contained in Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 36(c). The regulations at 10 CFR 50.36 require that the TSs include items in the following categories:

(1) safety limits, limiting safety systems settings, and limiting control settings; (2) LCOs; (3) surveillance requirements; (4) design features; and (5) administrative controls. As specified in 10 CFR 50.36(c)(2)(i), LCOs are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met.

Watts Bar Updated Final Safety Analysis Report (UFSAR) Section 7.4, "Systems Required for Safe Shutdown," describes monitoring indicators and controls needed to achieve and maintain safe shutdown in the event an evacuation of the control room is required.

RAI-1

TVA's proposed amendment included the following note:

For Function 4a, the temperature indicator for RCS hot leg 3 is not required to be operable for the remainder of Cycle 2. If WBN Unit 2 enters Mode 3 or 4 prior to the Unit 2 Cycle 2 refueling outage, the temperature modifier will be replaced. If the problem is not with the temperature modifier, entry into Mode 5 would be required to replace the thermocouple. If the thermocouple requires replacement, this repair will be performed if Unit 2 enters Mode 5. These repairs would occur prior to startup following a shutdown.

- a. As written, the note presents an apparent conflict between the statements "entry into Mode 5 would be required to replace the thermocouple" and "If the thermocouple requires replacement, this repair will be performed if Unit 2 enters Mode 5."
Please address this apparent conflict with respect to "entry into Mode 5 would be required" vs. "if Unit 2 enters Mode 5."
- b. As justification for the proposed change, TVA stated that shutdown to repair the temperature indication is not necessary because the remaining loop hot leg temperature indications available in the auxiliary control room are adequate to support safe shutdown of the unit and maintain the unit in a safe shutdown condition. Depending upon the interpretation of the conflicting statements noted in

a. above, this note may permit returning to power operation following a shutdown to Mode 3 or 4 with the RCS Loop 3 hot leg temperature indication remaining inoperable, if it is determined that the circuit inoperability is due to an inoperable thermocouple. Please address the operational considerations associated with either:

- Returning the plant to Mode 1 from Mode 3 or 4 with an inoperable RCS Loop 3 hot leg temperature indication due to an inoperable thermocouple.

vs.

- Establishing the necessary plant conditions to repair the thermocouple (i.e., continuing to Mode 5) to restore the indication to operable once the plant has been shutdown to Mode 3 or 4.

- c. The proposed Note describes the corrective actions that will be taken in future plant shutdowns, but does not explicitly state that the RCS Loop 3 hot leg indication will be restored to operable status following repair of the modifier circuit or thermocouple, as applicable. LCO 3.0.4.b states, in part:

When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made...

After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications.

TVA is requested to propose a modification to the proposed note to explicitly require the RCS Loop 3 hot leg indication function be restored to operable status prior to startup following repair of the modifier circuit or thermocouple, as applicable, or to include a statement that the provisions of LCO 3.0.4 are not applicable.