

TENNESSEE VALLEY AUTHORITY

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NOV 29 1989

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

Gentlemen:

In the Matter of the Application of) Docket Nos. 50-390
Tennessee Valley Authority) 50-391

WATTS BAR NUCLEAR PLANT (WBN) - NUCLEAR REGULATORY COMMISSION (NRC) GENERIC LETTER (GL) 89-21, REQUEST FOR INFORMATION CONCERNING STATUS OF IMPLEMENTATION OF UNRESOLVED SAFETY ISSUE (USI) REQUIREMENTS

As requested in the subject generic letter, the enclosure provides a status of the USI requirements for WBN Units 1 and 2. A detailed review to ensure completeness and accuracy has not been performed at this time. The resolution and implementation will be examined in detail by both TVA and NRC as part of the GL and bulletin review program, as discussed during the October 26, 1989 meeting with NRC. The detailed reviews that WBN will undergo before fuel load provide assurance of adequate resolution and implementation of the USI requirements. The items in the enclosure that have dates for completion have either a previous TVA commitment date or a projected date for completion and should not be considered as new commitments.

If you have any questions concerning this matter, please telephone T. W. Horning, WBN Site Licensing, at (615) 365-3381.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

Ralph H. Shell
for
Manager, Nuclear Licensing and
Regulatory Affairs

Enclosure
cc: See page 2

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ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2
STATUS OF UNRESOLVED SAFETY ISSUES (USI)

USI	Title	Status/Date Required	Remarks*
A-1	Water Hammer	C-02/84	The resolution of USI did not involve any hardware or design changes. It did consider NUREG-0737, Item I.A.2.3, on training upgrades. This item was closed by NRC in IR 390/83-56 for WBN.
A-2	Asymmetric Blowdown Loads on Reactor Coolant System	I/FL	Original issue for WBN was resolved with NRC in Supplemental Safety Evaluation Report (SSER) 2. Since that time, NRC relaxed their rules with a revision to General Design Criteria (GDC) 4 to consider leak-before-break (LBB). WBN submitted analyses to demonstrate LBB on 4/17/89. NRC expects to issue an SER by 11/30/89. Once NRC approves the methodology, the Final Safety Analysis Report (FSAR) will be revised to reflect the specific application.
A-3	<u>W</u> Steam Generator Tube Integrity	I (Unit 1)- 12/91; I (Unit 2)- FL	Modifications to WBN's Westinghouse (<u>W</u>) D3 steam generators (SGs) were made and approved by NRC in SSER4. Preservice inspections (PSIs) of the SGs have been completed. The PSI baseline data will be used for inservice inspection (ISI) program inspections of the SG tubes. Additionally, WBN's response to GL 85-02 dated 06/17/85 defines additional actions planned to address the NRC staff recommendations related to this USI. WBN Unit 2 will have additional secondary side inspections after hot functionals.
A-4	CE Steam Generator Tube Integrity	N/A	Not applicable to <u>W</u> SGs.

- C - Complete
- N/C - No Changes Necessary
- N/A - Not Applicable
- I - Incomplete
- E - Evaluating Actions Required
- F/L - Fuel Load
- IRO - First Refueling Outage

*Unless otherwise noted, remarks apply to Units 1 and 2.

<u>USI</u>	<u>Title</u>	<u>Status/Date Required</u>	<u>Remarks</u>
A-5	B&W Steam Generator Tube Integrity	N/A	Not applicable to <u>W</u> SGs.
A-6	Mark I Short-Term Program	N/A	Boiling water reactor (BWR) plants only.
A-7	Mark I Long-Term Program	N/A	BWR plants only.
A-8	Mark II Containment Pool Dynamic Loads	N/A	BWR plants only.
A-9	Anticipated Transients Without Scram (ATWS)	I/FL	TVA committed to install AMSAC and follow the Westinghouse Owners' Group (WOG) generic guidelines. Hardware is onsite but not yet installed. Remaining work includes hardware implementation, procedure upgrades, technical specifications (TS) upgrades, simulator upgrades, and operator training. WBN final submittals on ATWS were provided to NRC on 02/28/89 and 08/30/89. WBN is awaiting SER from NRC.
A-10	BWR Feedwater Nozzle Cracking	N/A	BWR plants only.
A-11	Reactor Vessel Materials Toughness	C-01/86	Unit 2 reactor vessel meets 10 CFR 50 Appendix G requirements. Unit 1 does not meet paragraph IV.b; however, adequate margin has been assured.
A-12	Fracture Toughness of Steam Generator and Reactor Coolant Pump Supports	N/A	Final USI resolution applied to plants with construction permits (CPs) issued after 1979 and, therefore, does not apply to WBN. However, WBN reviewed support materials in accordance with NUREG-0577. All support materials, except 3 heat codes of ASTM A-564XM16, used in SG bolting comply with requirements. All SG bolts were removed, heat treated, and replaced. See 10 CFR 50.55(e) GENNEB8201.
A-17	Systems Interactions	N/C	System interactions are to be addressed in the individual plant examination (IPE) for WBN required by GL 88-20. IPE is to be completed by 09/92.

<u>USI</u>	<u>Title</u>	<u>Status/Date Required</u>	<u>Remarks</u>
A-24	Qualification of Class 1E Safety-Related Equipment	I/FL	The WBN Environmental Qualification (EQ) Program was submitted to NRC 9/30/86. The remaining work includes hardware changes, procedure revisions, training, and documentation updates for each unit.
A-26	Reactor Vessel Pressure Transient Protection	I/FL	NRC approved in SSER2 (Section 5.2.2). Generic Letter 88-11 provided new guidance for heatup and cooldown rates in accordance with Regulatory Guide 1.99, R2. These curves will be incorporated into the draft WBN Units 1 and 2 TS that will be submitted to NRC for approval before fuel load of the respective units.
A-31	Residual Heat Removal (RHR) Shutdown Requirements	I/FL	NRC approved in SSER4 with one outstanding issue. Outstanding issue 14 is to verify that the RHR flow alarm has been installed.
A-36	Control of Heavy Loads	I/1R0	WBN's response to this USI was provided in the Phase I report for NUREG-0612, dated 02/06/84. NRC approval was provided in SSER3, with license condition to meet Phase I guidelines before first refueling outage. NRC deleted the Phase II requirement in GL 85-11. Remaining work is to install lifting beams and slings.
A-39	Determination of SRV Pool Dynamic Loads and Pressure Transients	N/A	BWR plants only.
A-40	Seismic Design Criteria	I/FL	Letter issued from NRC on resolution of this USI determined that seismic qualification of vertical tanks at four plants needs additional evaluation. WBN's response was issued to NRC 11/03/89 with a commitment to complete analysis by 02/01/90.
A-42	Pipe Cracks in BWRs	N/A	BWR plants only.

<u>USI</u>	<u>Title</u>	<u>Status/Date Required</u>	<u>Remarks</u>
A-43	Containment Emergency Sump Performance	N/A	USI resolved with no licensee action required. However, a Norris Laboratory evaluation performed for WBN indicated acceptable sump performance.
A-44	Station Blackout	E	WBN response is not due until 270 days after operating license of the respective units, in accordance with 10 CFR 50.63.
A-45	Shutdown Decay Heat Removal Requirements	N/C	This USI will be addressed in the IPE for WBN required by GL 88-20. IPE to be completed by 9/92.
A-46	Seismic Qualifi- cation of Equipment in Operating Plants	N/A	WBN does not meet the criteria of a USI A-46 operating plant. WBN has undergone an NRC Seismic Qualification Review Team (SQRT) review, based on IEEE/344-1971/75 for NTOL plants. WBN is evaluating utilization of Seismic Qualification Utility Group (SQUG) data for resolution of equipment seismic qualification issues. Any proposed application of SQUG data at WBN will be submitted to NRC for approval.
A-47	Safety Implications of Control Systems	E	Response to GL 89-19 concerning resolution of USI A-47 is due to NRC 03/13/90.
A-48	Hydrogen Control Measures and Effects of Hydrogen Burns	C-03/85	WBN has installed a Permanent Hydrogen Mitigation System (PHMS) similar to Sequoyah Nuclear Plant (SQN). Analyses were performed on the differences in SQN and WBN containments. The issue was closed in SSER4, except as a USI, because final resolution of the USI was not resolved at that time. No additional actions required by the resolution.
A-49	Pressurized Thermal Shock	C-05/86	RT _{PTS} has been calculated for both units and meets 10 CFR 50.61 screening criteria for the 32 effective full power years.