



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 8, 2010

Mr. Ashok S. Bhatnagar
Senior Vice President
Nuclear Generation Development
and Construction
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – REQUEST FOR ADDITIONAL
INFORMATION REGARDING LICENSEE'S FINAL SAFETY ANALYSIS
REPORT AMENDMENT RELATED TO QUALITY AND VENDOR BRANCH
REVIEW (TAC NO. ME2731)

Dear Mr. Bhatnagar:

By letter dated January 11, 2010 (NRC Agencywide Documents Access and Management System Accession No. ML100191686), the Tennessee Valley Authority (TVA) submitted Final Safety Analysis Report (FSAR) Amendment No. 97 for Watts Bar Nuclear Plant (WBN), Unit 2. The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by the TVA in FSAR Amendment No. 97.

In an effort to complete the NRC staff review, enclosed is a request for additional information (RAI) regarding the quality and vendor branch review for FSAR Section 14.2. The NRC staff's RAI seeks information on WBN Unit 2 as it relates to dual-unit operation of the facility. The NRC staff RAI addresses those areas that the NRC staff found differences in WBN Unit 2 from Unit 1, or the NRC staff found information lacking for the staff to reach a safety conclusion.

A response is required within 30 days of receipt of this letter.

If you should have any questions, please contact me at 301-415-6606.

Sincerely,

A handwritten signature in cursive script that reads "Joel S. Wiebe".

Joel S. Wiebe, Senior Project Manager
Watts Bar Special Projects Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosure: RAI

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION
WATTS BAR NUCLEAR PLANT, UNIT 2
FINAL SAFETY ANALYSIS REPORT AMENDMENT NO. 97
TENNESSEE VALLEY AUTHORITY
DOCKET NO. 50-391

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In an effort to complete the NRC staff review, below is a request for additional information (RAI) regarding the quality and vendor branch (EQVB) review for FSAR Section 14.2. The NRC staff's RAI seeks information on WBN Unit 2 as it relates to dual-unit operation of the facility. The NRC staff RAI addresses areas that the NRC staff found differences in WBN Unit 2 from Unit 1, or the NRC staff found information lacking for the staff to reach a safety conclusion.

EQVB RAIs for FSAR Section 14.2

1. FSAR Chapter 14, Table 14.2-1, Sheet 48 of 90, "[Alternating Current] AC Power Distribution System Test Summary," TVA deleted the requirement to verify Item 5 "Demonstrate manual and automatic transfer schemes operate in accordance with design drawings" under "Test Method." The NRC staff did not find a basis or justification for deletion of this test. The NRC staff requests TVA to provide a basis or justification why this test is not required for start of WBN Unit 2 to demonstrate the capability of the manual and automatic transfer schemes for the AC power distribution system for dual-unit operation. Also, provide a description of the transfer scheme to include whether running loads are shed and then re-sequenced on, or if the loads are block loaded. If TVA is taking credit for the Technical Specification (TS) Surveillance Requirement (SR) 3.8.1.8 currently performed for WBN Unit 1 every 18 months for deleting this test requirement, then describe how the loads of WBN Unit 2 are included in this surveillance.
2. FSAR Chapter 14, Table 14.2-1, Sheet 48 of 90, "AC Power Distribution System Test Summary," TVA revised Item 7 (renumbered item 6) to state that it will verify the capability of each common station service transformer (CSST) to carry the load required to supply engineered safety feature (ESF) loads for its respective load group under WBN Unit 2 loss-of-coolant accident (LOCA) conditions. The NRC staff finds this commitment to be different than the staff's acceptance documented in Supplements 14 and 16 to NUREG -0847, "Safety Evaluation Report Related to the Operation of Watts Bar Nuclear Plant Units 1 and 2." In Supplement 16 to NUREG-0847, the NRC staff accepted TVA's position to demonstrate the capability of each CSST to carry the load required to supply ESF loads on one unit (WBN Unit 1) under LOCA condition since TVA, at that time, was not seeking an operating license for WBN Unit 2. The NRC staff documented its acceptance of TVA's position based on the commitment that before issuance of an

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operating license for WBN Unit 2, TVA would have to demonstrate the capability of each CSST to carry the load required to supply ESF loads of one unit (WBN Unit 2) under LOCA conditions in addition to power required for shutting down the non-accident unit (WBN Unit 1). Therefore, the NRC staff requests that TVA revise its test commitment to verify the capability of each CSST with LOCA conditions in WBN Unit 2 in addition to power required for normal shutdown (non-accident loads) of WBN Unit 1, or provide an explanation and justification why the original commitment was revised.

3. FSAR Chapter 14, Table 14.2-1, Sheet 49 of 90, "AC Power Distribution System Test Summary," TVA deleted the requirement to verify Item 2 under Acceptance Criteria. The NRC staff did not find a basis or justification for deletion of this test. The NRC staff requests TVA to provide a justification why this test is not required for the start of WBN Unit 2. TVA should describe how the loads of WBN Unit 2 are addressed with respect to the capability of the manual and automatic transfer schemes for the AC power distribution system between onsite (standby) diesels units from normal or alternate supply for dual-unit operation.
4. FSAR Chapter 14, Table 14.2-1, Sheet 44 of 89, "Diesel Generator Test Summary," TVA deleted the requirements to verify Items 1 through 5 under Test Method. The NRC staff did not find a basis or justification for deletion of these tests. The NRC staff requests TVA to provide a justification why these tests are not required for the start of WBN Unit 2. If these tests are currently being performed under the WBN Unit 1 TS SRs, then provide a summary of the impact on these tests for the WBN Unit 2 diesel generators due to dual-unit operation. Also, identify the WBN Unit 1 TS surveillances that are currently being performed to accomplish these tests.
5. FSAR Chapter 14, Table 14.2-1, Sheet 45 of 89, "Diesel Generator Test Summary," TVA deleted the requirement to verify Item 10 under Test Method. If this test is currently performed on WBN Unit 2 diesel generators under the WBN Unit 1 TS SR 3.8.1.14 requirements, then confirm that the WBN Unit 1 TS SR 3.8.1.14 accomplishes this test. Also, confirm that the surveillance performed for verifying WBN Unit 2 diesel generator capacity envelops the design-basis accident loads of WBN Unit 2 plus the power required for the WBN Unit 1 loads.
6. The FSAR Table 14.2-1, Chapter 14 (Sheets 44 and 45 of 89), "Diesel Generator Test Summary," does not list a test that the WBN Unit 2 diesel generators automatic trip are bypassed on automatic or emergency start signal except for engine overspeed and generator differential current. The NRC staff requests TVA to provide a justification why this test is not required for start of WBN Unit 2. If this test is currently performed on WBN Unit 2 diesel generators under the WBN Unit 1 TS SRs, then identify the WBN Unit 1 TS SR that accomplishes this test.

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Sincerely,

/RA/

Joel S. Wiebe, Senior Project Manager
Watts Bar Special Projects Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosure: RAI

cc w/encl: Distribution via Listserv

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ADAMS Accession No. ML101600026

OFFICE	LPWB/PM	LPWB/LA	EQVB/BC	OGC/NLO	LPWB/BC
NAME	JWiebe	BClayton	DThatcher	DRoth	SCampbell
DATE	06/11/10	06/10/10	06/11/10	06/24/10	07/08/10

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