

November 20, 2007

Mr. William R. Campbell, Jr.  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 – REQUEST FOR ADDITIONAL  
INFORMATION REGARDING TECHNICAL SPECIFICATION CHANGE TS-07-04,  
REACTOR TRIP SYSTEM/ENGINEERED SAFETY FEATURE LOGIC,  
REACTOR TRIP BREAKER ALLOWABLE OUTAGE TIME AND SURVEILLANCE  
TESTING INTERVAL RELAXATIONS (TAC NO. MD5880)

Dear Mr. Campbell:

By letter dated June 8, 2007, the Tennessee Valley Authority (TVA, the licensee) submitted a proposed license amendment that affects several technical specification sections to allow relaxations of various reactor trip system/engineered safety feature logic completion times, bypass test times, and surveillance testing intervals through implementation of Technical Specification Task Force (TSTF) 418, Revision 2 and TSTF 411, Revision 1.

In order for the Nuclear Regulatory Commission staff to complete its review of the information provided by the licensee, we request that TVA provide responses to the enclosed request for additional information (RAI). Based on discussions with your staff, we understand that you plan to respond to the enclosed RAI by December 14, 2007. If you have any questions about this material, please contact me at (301) 415-3974.

Sincerely,

**/RA/**

Brendan T. Moroney, Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosure: RAI

cc w/enclosure: See next page

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SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 – REQUEST FOR ADDITIONAL INFORMATION REGARDING TECHNICAL SPECIFICATION CHANGE TS-07-04, REACTOR TRIP SYSTEM/ENGINEERED SAFETY FEATURE LOGIC, REACTOR TRIP BREAKER ALLOWABLE OUTAGE TIME AND SURVEILLANCE TESTING INTERVAL RELAXATIONS. (TAC NO. MD5880)

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William R. Campbell, Jr.  
Tennessee Valley Authority  
cc:

Mr. Gordon P. Arent  
New Generation Licensing Manager  
Tennessee Valley Authority  
5A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

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

Mr. James R. Douet  
Vice President  
Nuclear Support  
Tennessee Valley Authority  
3R Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. H. Rick Rogers  
Vice President  
Nuclear Engineering & Technical Services  
Tennessee Valley Authority  
3R Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. Michael D. Skaggs, Site Vice President  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Spring City, TN 37381

General Counsel  
Tennessee Valley Authority  
6A West Tower  
400 West Summit Hill Drive  
Knoxville, TN 37902

Mr. John C. Fornicola, Manager  
Nuclear Assurance  
Tennessee Valley Authority  
3R Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. Larry E. Nicholson, General Manager  
Performance Improvement  
Tennessee Valley Authority  
4X Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

## WATTS BAR NUCLEAR PLANT

Ms. Beth A. Wetzel, Manager  
Corporate Nuclear Licensing and  
Industry Affairs  
Tennessee Valley Authority  
4X Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. Masoud Bajestani, Vice President  
Watts Bar Unit 2  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000, EQB 1B  
Spring City, TN 37381

Mr. Michael K. Brandon, Manager  
Licensing and Industry Affairs  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Spring City, TN 37381

Mr. Michael J. Lorek, Plant Manager  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Spring City, TN 37381

Senior Resident Inspector  
Watts Bar Nuclear Plant  
U.S. Nuclear Regulatory Commission  
1260 Nuclear Plant Road  
Spring City, TN 37381

County Executive  
375 Church Street  
Suite 215  
Dayton, TN 37321

County Mayor  
P. O. Box 156  
Decatur, TN 37322

Mr. Lawrence E. Nanney, Director  
Division of Radiological Health  
Dept. of Environment & Conservation  
Third Floor, L and C Annex  
401 Church Street  
Nashville, TN 37243-1532



REQUEST FOR ADDITIONAL INFORMATION

WATTS BAR NUCLEAR PLANT, UNIT 1

TECHNICAL SPECIFICATIONS CHANGE REQUEST TS-07-04

DOCKET 05-390

To support Nuclear Regulatory Commission assessment of the acceptability of the proposed changes, please provide the response to the following items:

1. The proposed change to Condition P of TS Section 3.3.1, page 3.3-6 cites Technical Specification Task Force (TSTF) 411, Rev. 1, as the basis for the change. This is apparently an error since the revised times do not match those in TSTF-411. Also, it is not consistent with item 7 on page E1-2 and the revised technical specification (TS) bases, page B 3.3-47, which refer to TSTF-418, Rev. 2. Please check the referenced TSTF and update the submittal as appropriate.
2. Condition K of TS Section 3.3.2, page 3.3-28 applies to RWST Level – Low coincident with Safety Injection and coincident with Containment Sump Level - High. This is also noted as condition K in TSTF-418, Rev. 2; page 3.3.2 -5. The revised completion times of 72 hours for required action K.1, 78 hours for required action K.2.1, and 108 hours for K.2.2 are not consistent with the revised completion times of 6 hours for K.1, 12 hours for K.2.1, and 42 hours for K.2.2 noted on page 3.3.2 -5 of TSTF-418, Rev. 2. The word “additional” has also been deleted in the submittal but it remains in the text of the required action in the TSTF. Please explain the justification for the differences and provide appropriate reference for this change. If plant specific evaluations have been made for these changes, then please provide us with the reference documents. Also please update the bases section for this item as appropriate.
3. The analysis for Westinghouse Commercial Atomic Power (WCAP) topical reports WCAP-14333 and WCAP-15376 assumed that maintenance on master and slave relays, logic cabinets, and analog channels while at power occurs only after a component failure, and that preventive maintenance does not occur. The topical reports do not preclude the practice of at-power preventive maintenance but limits the total time a component is unavailable due to corrective or preventive maintenance to the values used in the analysis. Confirm that the unavailability for components evaluated in WCAP-14333 and WCAP-15376 are consistent with the plant specific estimates at Watts Bar Nuclear Plant (WBN), Unit 1 and do not exceed those assumed in the analysis.
4. Describe the program to be implemented to monitor reactor trip system (RTS) and engineered safety features actuation system (ESFAS) structures systems and components (SSCs) to ensure equipment unavailability and component failure data remains consistent with WCAP-15376 and WCAP-14333 modeling assumptions. Refer to Regulatory Guide (RG) 1.174 Section 2.3, “Define Implementation and Monitoring Program.”



5. Provide an assessment of external events risk impact, including seismic, fire and external floods/high wind, with respect to the proposed completion times (CT) and surveillance test intervals extensions, per RG 1.174 Section 2.2.4, "Acceptance Guidelines," and RG 1.177 Section 2.3.2, "Scope of the PRA [Probability Risk Assessment] for TS Applications." Include any seismic vulnerabilities associated with instrumentation/logic systems or components. Discuss the risk impact of WCAP-14333 and WCAP-15376 on fire screening criteria and quantification of fire sequences previously screened from the analysis. In addition, confirm that the combined total core damage frequency (CDF) from external and internal events will remain less than the RG 1.174 base CDF of 1E-4 per year.
6. Provide a discussion on the following aspects of PRA quality for WBN, Unit 1.
  - (a) Provide the date of WBN, Unit 1 PRA industry peer review and date of certification. Provide details of any licensee self assessments performed against RG 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk -Informed Activities."
  - (b) Reference PRA quality assurance programs/procedures, including expected PRA revision schedules.
  - (c) Address PRA adequacy and completeness with respect to evaluating the proposed CT and bypass test times under Tier 3 configuration risk management. Describe the Tier 3 evaluation, including modified procedures/risk assessment methodology, as appropriate, for SSCs incorporating the proposed WCAP-14333 and WCAP-15376 CT and bypass test times. Discuss the representative RTS and ESFAS actuation signals in the WBN, Unit 1 plant risk matrix sufficient to perform Tier 3 evaluations on these SSCs to ensure that Tier 3 evaluations reflect the implementation of WCAP-15376 and WCAP-14333.
  - (d) Address plant-specific design or operational modifications not reflected in the WCAP-14333/WCAP15376 evaluation for WBN, Unit 1, but implemented prior to this application that are related to or could impact this application. Justify the acceptability of not including these modifications in the PRA as part of this application.
7. Enclosure 1, Page E1-14, references equipment restrictions that will be put in place (WCAP-15376 Tier 2). The referenced restrictions appear to be inconsistent with the restrictions stated for WCAP-15376, Section 8.5. Specifically, clarify the applicability of a logic cabinet out-of-service with the associated reactor trip breaker out-of-service (i.e., 3<sup>rd</sup> bullet).
8. Confirm that the restrictions identified in the license amendment request (Enclosure 1, Pages 13 and 14) for the implementation of WCAP-15376 and WCAP-14333 are intended to be regulatory commitments.