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

February 11, 2009

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

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – STATUS OF REGULATORY FRAMEWORK FOR THE COMPLETION OF CORRECTIVE ACTION AND SPECIAL PROGRAMS AND UNRESOLVED SAFETY ISSUES (TAC NO. MD9424)

Dear Mr. Bhatnagar:

By letters dated January 29 and March 13, 2008, Tennessee Valley Authority (TVA) provided to the Nuclear Regulatory Commission (NRC) its framework for the completion of construction and licensing activities for Watts Bar Nuclear Plant (WBN) Unit 2. As part of the licensing basis discussion in its January 29 letter, TVA provided a description of the corrective action programs (CAPs) and special programs (SPs) included in the Watts Bar Nuclear Performance Plan and a summary of TVA's proposed resolution for Unit 2.

The NRC staff reviewed the information provided by TVA in the May 29, 2008, letter and determined that additional information is required to complete its evaluation. By letter dated November 25, 2008, the staff requested the additional information and TVA responded by letter dated January 14, 2009. This response is under review.

Based on subsequent discussions with the staff, TVA agreed to supplement the CAP and SP summaries to provide additional information on the status of these programs, basis for proposed action, and impact on other aspects of the licensing framework due to these programs. In a letter dated September 26, 2008, TVA provided the summaries of the CAPs and SPs describing the proposed actions, current status of licensing review, analysis of conformance, impact on final safety analysis report, impact on technical specifications and technical requirements manual, items requiring verification and inspection, and interdependencies of these issues.

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, the CAP and SP issues designated as acceptable in the attached assessment (Enclosure 1) will be appropriately resolved for WBN Unit 2.

The staff also identified that because of the length of time the hardware has been in a nonconforming condition (for example, inadequate vertical cable support) or other reasons, additional clarification or additional review may be necessary for the issues designated as needs review in Enclosure 1.

TVA should revise its regulatory framework status to match the staff's determination. In particular, TVA should maintain the list of open items from Enclosure 1 and then update the information as actions are completed, proper documentation submitted to the NRC staff for review, and the NRC staff documents its review and acceptance of CAPs and SPs. If TVA or the NRC staff determines that a previously reviewed and completed item needs to be reopened, TVA should add the item to the list and highlight this action as having occurred. TVA is also requested to provide an update to the status, including references to TVA and NRC supporting documentation, at least every 6 months. The NRC staff will use this information to verify the completion of open actions and to coordinate the need for independent validation of implementation through inspections

The Tables in Enclosures 2 and 3 provide a summary of the staff's conclusions.

If you have questions regarding the staff's assessment or actions requested of TVA, please contact me at 301-415-1457.

Sincerely,

Patrick D. Milano, Acting Branch Chief
Watts Bar Special Projects Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosures:
1. CAP-SP Status Assessment
2. Table 1, "Corrective Action Program Review Status"
3. Table 2, "Special Program Review Status"

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UNITED STATES
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ASSESSMENT BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO THE STATUS OF REGULATORY FRAMEWORK FOR THE COMPLETION OF CORRECTIVE ACTION AND SPECIAL PROGRAMS

TENNESSEE VALLEY AUTHORITY

WATTS BAR NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-391

1.0 INTRODUCTION

The Watts Bar Nuclear Performance Plan (WBNPP) was submitted to the U. S. Nuclear Regulatory Commission (NRC) by Tennessee Valley Authority (TVA) letter dated May 27, 1988 (Agency Document and Management System Accession Number ML080390551). The NRC staff documented its review and findings concerning the WBNPP in NUREG-1232, Volume 4, "Safety Evaluation Report on Tennessee Valley Authority: Watts Bar Nuclear Performance Plan." In this safety evaluation, the NRC staff found that there were several issues that required additional information before they could complete their review. The NRC staff stated therein that these programs will continue to be reviewed and monitored and would issue a revised evaluation in a supplement to NUREG-0847, "Safety Evaluation Report Related to the Operation of Watts Bar Nuclear Plant, Units 1 and 2." Starting in Supplement 5, a Section on corrective action programs (CAPs) and special programs (SPs) was added to NUREG-0847 to provide the status of TVA's implementation and the status of the NRC staff review.

By letter dated September 6, 1991, the TVA transmitted Revision 1 of the WBNPP to the NRC. The NRC staff concluded in NUREG-0847, Supplement 9 that the revision did not necessitate a revision of NUREG-1232. As reported in NUREG-0847, Supplement 19, all CAPs and SPs were acceptably implemented by the licensee. Supplement 19 also listed all applicable safety evaluations that found these programs acceptable and the inspection reports that verified implementation.

Because the NRC has not issued a safety evaluation for these programs for Watts Bar Nuclear Plant (WBN) Unit 2, the NRC staff had asked TVA to confirm that previous WBNPP submittals for WBN Unit 1 were also applicable to Unit 2. Further, the staff asked TVA to identify any cases where TVA expects to revise a CAP or SP for use on WBN Unit 2 and provide a schedule for submitting justification for the revision to NRC for its review. Therefore, TVA provided, as one of the enclosures to its January 29, 2008, letter, a table giving the status of these programs and TVA commitments for Unit 2. TVA also provided a separate table listing those CAP and SP items requiring NRC review and approval. In this regard, TVA stated that it had evaluated these CAPs and SPs and determined that, with two exceptions (Cable Issues and Electrical Issues), they will be resolved using the methodology employed for Unit 1.

In a letter dated May 29, 2008, TVA provided the program methods that it proposed to use to resolve those issues that are different from the resolution used for WBN Unit 1. In this regard, TVA provided the differences and their justification for five subissues of the Cable Issues CAP. TVA also stated that, upon further consideration, they decided to use the same approach as was used on Unit 1 for the electrical subissue pertaining to Physical Cable Separation and Electrical Isolation that had previously been identified in the January 29, 2008, letter as an issue that would have a different resolution. TVA requested NRC approval of the alternative program methods to address the Cable Issues CAP.

The NRC staff reviewed the information provided by TVA in the May 29, 2008, letter and determined that additional information is required to complete its evaluation. By letter dated November 25, 2008, the staff requested the additional information and TVA responded by letter dated January 14, 2009. This response is under review.

Based on subsequent discussions with the staff, TVA agreed to supplement the CAP and SP summaries to provide additional information on the status of these programs, basis for proposed action, and impact on other aspects of the licensing framework due to these programs. In a letter dated September 26, 2008, TVA provided the summaries of the CAPs and SPs describing the proposed actions, current status of licensing review, analysis of conformance, impact on final safety analysis report, impact on technical specifications and technical requirements manual, items requiring verification and inspection, and interdependencies of these issues.

2.0 REGULATORY EVALUATION

On September 17, 1985, the Executive Director for Operations of the NRC issued a letter to the Chairman of the Board of Directors of the TVA pursuant to Title 10 of the Code of Federal Regulations Section 50.54(f) requesting information on the actions the licensee was taking to resolve NRC's concerns about TVA's nuclear program.

TVA's Corporate Nuclear Performance Plan (CNPP), which was prepared in response to the NRC letter, was submitted to the NRC on November 1, 1985. In addition to its corporate nuclear performance plan, TVA prepared separate plans to address site-specific problems at each of its nuclear plants. NUREG-1232, Volume 4 documents the staff's review of the corrective actions developed by TVA to resolve problems listed in Volume 4 of the CNPP, "Watts Bar Nuclear Performance Plan (WBNPP)."

This assessment documents the status of the staff's review of TVA's plans to address the CAP and SP issues for Watts Bar Unit 2.

3.0 TECHNICAL EVALUATION

3.1 Cable Issues

3.1.1 Silicon Rubber Insulated Cable

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Additional staff review is needed for scope and methodology.

3.1.2 Cable Jamming

Staff Review Status

TVA responded to a request for additional information (RAI), which is currently under review.

3.1.3 Cable Support in Vertical Conduit

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Additional staff review is needed for scope and methodology.

3.1.4 Cable Support in Vertical Trays

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Additional staff review is needed for scope and methodology

3.1.5 Cable Proximity to Hot Pipes

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Additional staff review is needed for scope and methodology

3.1.6 Cable Pull-Bys

Staff Review Status

TVA responded to RAI, which is currently under review.

3.1.7 Cable Bend Radius

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Additional staff review is needed for scope and methodology

3.1.8 Cable Splices

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Clarification needed.

3.1.9 Cable Sidewall Bearing Pressure

Staff Review Status

TVA responded to RAI, which is currently under review.

3.1.10 Pulling Cables Through 90° Condulet and Flexible Conduit

Staff Review Status

TVA responded to RAI, which is currently under review.

3.1.11 Computer Cable Routing System Software and Database Verification and Validation

Staff Review Status

TVA responded to RAI, which is currently under review.

3.2 Cable Tray and Tray Supports

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.3 Design Baseline and Verification Program

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.4 Electrical Conduit and Conduit Support

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.5 Electrical Issues

3.5.1 Flexible Conduit Installations

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Additional staff review is needed for scope and methodology.

3.5.2 Physical Cable Separation and Electrical Isolation

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Clarification needed.

3.5.3 Contact and Coil Rating of Electrical Devices

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.5.4 Torque Switch and Overload Relay Bypass Capability for Active Safety-Related Valves

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

Clarification needed.

3.5.5 Adhesive-Backed Cable Support Mount

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this subissue. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.6 Equipment Seismic Qualification

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.7 Fire Protection

TVA Proposed Action

TVA requests that the NRC concur with TVA's understanding that the approach for this program was approved for both units during Unit 1 completion and that the only NRC actions remaining involve implementation. TVA further stated in their letter dated September 26, 2008, that the Fire Protection CAP was accepted for both units in SER Supplements 18 and 19. On the basis of these considerations, TVA stated that the Unit 1 approach will be used for Unit 2.

Staff Review Status

In NUREG-0847, Supplement 18, Appendix FF the staff states that, "The applicant initially revised its report on the fire protection program for Watts Bar as a result of a comprehensive review under its Fire Protection Corrective Action Program." The staff further states therein that, "Because Watts Bar has two units of identical design (except as noted), this evaluation applies to the fire protection program for both units." Based on the scope and objectives and description of this CAP plan as described in NUREG-1232, Volume 4, and the staff's statements described above, the staff determined that the conclusion of CAP plan acceptability for this

issue in NUREG-1232, Volume 4 is applicable to Unit 2. Therefore, the staff determined there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 method is acceptable.

3.8 Hanger and Analysis Update Plan

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.9 Heat Code Traceability

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.10 Heating, Ventilation, and Air-Conditioning Duct and Duct Supports

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.11 Instrument Lines

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve this CAP. Additionally, TVA requests that NRC approve the elimination of a separate Unit 2 statistically random sample of instrument line supports to address installation discrepancies.

Staff Review Status

In their letter dated September 26, 2008, TVA states that a detailed evaluation of a statistically random sample of over 10,000 instrument line supports of Unit 1 and Unit 2 lines that support Unit 1 was performed to address installation discrepancies involving support documentation that was determined to be lost or incorrect for some instrument lines. The evaluation determined that the instrument lines and supports would comply with existing design basis requirements provided that the attachment clamps and bolts were properly installed. TVA further states that Unit 2 has installations similar to Unit 1, Unit 2 fabrications used the same drawings where applicable, the same craft worked on both units, and problems had common root causes. Based on the above, the staff concludes that a detailed evaluation of a separate random sample of Unit 2 supports is not needed to address installation discrepancies, provided a walkdown of supports is performed to ensure clamps and bolts are properly installed.

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.12 Prestart Test Program Plan

TVA Proposed Action

In their letter dated August 3, 2007, TVA stated that the Prestart Testing Program CAP for Unit 1 was withdrawn with the resubmittal of Chapter 14 of the FSAR to conform to the requirements of Regulatory Guide 1.68. The entire program is described in Chapter 14 of Amendment 91 of the FSAR.

Staff Review Status

NUREG-1232, Section 3.2.12 documents that the principal objective of this CAP is to engender confidence that certain preoperational tests, which previously demonstrated operational capability, remain valid. NUREG-0847, Supplement 19, Section 1.13.1 (12) documents that this CAP was withdrawn and that TVA reperformed the preoperational test program in accordance with Regulatory Guide 1.68, Revision 2. Discussions with TVA staff on February 3, 2009, provided clarification that the Unit 2 test program was never started and TVA intends to perform the Unit 2 test program as committed in Chapter 14 of the FSAR. Based on the above, the NRC staff concludes that this CAP should be closed. Notwithstanding the above, all activities and conditions at Unit 2 may be subject to NRC inspection.

3.13 Quality Assurance (QA) Records

TVA Proposed Action

TVA requests the NRC close this CAP.

Staff Review Status

TVA states that relevant Unit 2 records are similar to Unit 1 records and the same personnel were involved with Unit 1 and Unit 2 records. As a result, TVA concludes that Unit 2 record issues will be similar to Unit 1. TVA further states that based on sampling and subsequent evaluation, procedures were put in place to ensure similar problems would be addressed going forward and that these procedures will be used for Unit 2 activities. TVA concludes that the problems that exist with Unit 2 records will be identified and corrected in the process of QA record use within the scope of CAPs, SPs, and other design, modification and construction activities.

Additional clarification from TVA is required to demonstrate that the programs and activities identified in the September 26, 2008, submittal will identify and correct the historical QA record problems acknowledged to exist for Unit 2. If programs and activities outside the September 26, 2008, submittal are to be used, identify them and provide information demonstrating how they accomplish this objective.

3.14 Q-List

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

In their letter dated September 26, 2008, TVA states that the CAP action including developing a new Q-List and then comparing the new Q-List to the old Q-List to identify upgraded components. No field work resulted from the Unit 1 upgraded components. TVA further states that in lieu of developing a new Q-List for Unit 2, the Unit 1 Q-List will be used as the basis for the Unit 2 Q-List. TVA states that component identifiers that are unique to Unit 2 will be evaluated for classification and Unit 2 existing components will be evaluated for acceptability. Based on the above the staff concludes that use of the Unit 1 Q-List as the basis for the Unit 2 Q-List is an acceptable method for developing the Unit 2 Q-List.

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach, as modified above, is acceptable.

3.15 Replacement Items Program (Piece Parts)

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve this CAP and, instead of back checks of previously installed and/or procured replacement items, plans an extensive refurbishment program which will include ensuring that replacement items have been properly procured, have adequate documentation and are traceable.

Staff Review Status

In their letter dated September 26, 2008, TVA states that several of the actions performed at the completion of Unit 1, such as the evaluation of warehouse inventory and continued control of dedications are common to both units are considered complete. TVA states that for Unit 2, an extensive refurbishment program is planned, which will address the replacement items used during prior Unit 2 activities and this process will ensure proper documentation and control of replacement parts. Based on the above, the staff concludes that those actions performed at the completion of Unit 1 and that have continuing controls that apply to both units should be considered complete.

The staff determined that additional clarifying information is needed from TVA to demonstrate that back checks of previously installed replacement items and procured replacement items are not required based on plans to implement the extensive refurbishment program referred to, above.

3.16 Seismic Analysis

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.17 Vendor Information Program

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.18 Welding

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.19 Concrete Quality Program

TVA Proposed Action

TVA requests the NRC close this SP because previous actions were taken to address the issue for both units.

Staff Review Status

In their letter dated September 26, 2008, TVA requests that the NRC close this SP because the issues associated with concrete quality were not unit specific and involved material used for both units. The staff verified that TVA report CEB-87-03C, "Watts Bar Nuclear Plant – Concrete Quality Evaluation – Testing of In-Place Concrete," is applicable to both units. This report was forwarded by letter dated April 16, 1987. Based on the above the staff determined that the conclusion in NUREG-1232 that, " . . . the strength of concrete and bedding mortar at Watts Bar is satisfactory from a safety standpoint and these issues are resolved," is applicable to Unit 2. The staff, therefore, concludes that this SP should be closed.

3.20 Containment Cooling

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.21 Detailed Control Room Design Review

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.22 Environmental Qualification Program

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.23 Master Fuse List

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable

3.24 Mechanical Equipment Qualification

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.25 Microbiologically Induced Corrosion

TVA Proposed Action

TVA requests that the NRC concurs with TVA's understanding that the approach for this program was approved for both units during Unit 1 completion and that the only NRC actions remaining involve implementation.

Staff Review Status

In their letter dated September 26, 2008, TVA requests that the NRC concur with TVA's understanding that the approach for this program was approved for both units during Unit 1 completion and that the only NRC actions remaining involve implementation. TVA states that the biocide injection system and corrosion monitoring equipment already installed at WBN are common for both units. The staff verified that the conclusions in NUREG-0847, Supplements 8 and 10, Appendix Q, regarding this CAP is applicable to both units. The staff, therefore, concludes that no additional approval is necessary for Unit 2.

3.26 Moderate Energy Line Break Flooding

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.27 Radiation Monitoring System

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

3.28 Soil Liquefaction

TVA Proposed Action

TVA requests the NRC close this SP because previous actions were taken to address the issue for both units.

Staff Review Status

In their letter dated September 26, 2008, TVA requests that the program be closed. TVA states that the area of the plant which was of concern was the west side of the intake pumping station and no other area had this concern. The staff reviewed NUREG-0847, Supplements 9 (Section 2.5.4) and 11 (Section 2.5.4.4). Supplement 9 documented the staff's finding that the program was acceptable and further concluded that the SP had been acceptably implemented for Unit 1. Based on no other areas of concern, the staff concludes that this SP should be closed.

3.29 Use-As-Is Condition Adverse to Quality

TVA Proposed Action

TVA requests that the NRC review and approve the approach for closing this program. For Unit 2, TVA will use the Unit 1 approach to resolve it.

Staff Review Status

The NRC staff reviewed the information provided by TVA in the January 29, 2008, and September 26, 2008, letters and determined that based on the TVA description and the staff's review documented in NUREG-1232, Volume 4 and the applicable supplements of NUREG-0847, there is reasonable assurance that, when implemented as described, this issue will be appropriately resolved for WBN Unit 2. Use of the Unit 1 approach is acceptable.

4.0 CONCLUSION

At this time, there are several issues which require additional information or clarification before the NRC staff can complete its review. Resolution of these issues will be discussed in future assessments or safety evaluations. The purpose of this assessment is to document the status of the staff's review of the CAP and SP issues.

Principal Contributors: Patrick Milano
Joel Wiebe

Date: February 11, 2009

Table 1

Corrective Action Program Review Status

No.	Corrective Action Program Plan	Acceptable	Needs Review
1	Cable Issues		
	a. Silicon Rubber Insulated Cable		X[2]
	b. Cable Jamming		X[1]
	c. Cable Support in Vertical Conduit		X[2]
	d. Cable Support in Vertical Trays		X[2]
	e. Cable Proximity to Hot Pipes		X[2]
	f. Cable Pull-Bys		X[1]
	g. Cable Bend Radius		X[2]
	h. Cable Splices		X[3]
	i. Cable Sidewall Bearing Pressure		X[1]
	j. Pulling Cables Through 90° Condulet and Flexible Conduit		X[1]
	k. Computer Cable Routing System Software and Database Verification and Validation		X[1]
2	Cable Tray and Tray Supports	X	
3	Design Baseline and Verification Program	X	
4	Electrical Conduit and Conduit Support	X	
5	Electrical Issues		
	a. Flexible Conduit Installations		X[2]
	b. Physical Cable Separation and Electrical Isolation		X[3]
	c. Contact and Coil Rating of Electrical Devices	X	
	d. Torque Switch and Overload Relay Bypass Capability for Active Safety-Related Valves		X[3]
	e. Adhesive-Backed Cable Support Mount	X	
6	Equipment Seismic Qualification	X	

[1] TVA responded to RAI. Under review.
[2] Staff review needed for scope and methodology.
[3] Clarification needed.

Table 1 (Cont'd)
Corrective Action Program Review Status

No.	Corrective Action Program (CAP) Plan	Acceptable	Needs Review
7	Fire protection	X	
8	Hanger and Analysis Update Program	X	
9	Heat Code Traceability	X	
10	Heating, ventilation, and Air-Conditioning Duct and Duct Supports	X	
11	Instrument Lines	X	
12	Prestart Test Program Plan	X[4]	
13	QA Records		X[5]
14	Q-List	X	
15	Replacement Items Program (Piece Parts)		X[5]
16	Seismic Analysis	X	
17	Vendor Information Program	X	
18	Welding	X	

[4] Closed
[5] Clarification

Table 2

Special Program Review Status

No.	Special Programs (SP)	Acceptable
1	Concrete Quality Program	X[6]
2	Containment Cooling	X
3	Detailed Control Room Design Review	X
4	Environmental Qualifications Program	X
5	Master Fuse List	X
6	Mechanical Equipment Qualification	X
7	Microbiologically Induced Corrosion (MIC)	X
8	Moderate Energy Line Break Flooding	X
9	Radiation Monitoring System	X
10	Soil Liquefaction	X[6]
11	Use-as-Is Condition Adverse to Quality (CAQ)	X

[6] Closed

The staff also identified that because of the length of time the hardware has been in a nonconforming condition (for example, inadequate vertical cable support) or other reasons, additional clarification or additional review may be necessary for the issues designated as needs review in Enclosure 1.

TVA should revise its regulatory framework status to match the staff's determination. In particular, TVA should maintain the list of open items from Enclosure 1 and then update the information as actions are completed, proper documentation submitted to the NRC staff for review, and the NRC staff documents its review and acceptance of CAPs and SPs. If TVA or the NRC staff determines that a previously reviewed and completed item needs to be reopened, TVA should add the item to the list and highlight this action as having occurred. TVA is also requested to provide an update to the status, including references to TVA and NRC supporting documentation, at least every 6 months. The NRC staff will use this information to verify the completion of open actions and to coordinate the need for independent validation of implementation through inspections

The Tables in Enclosures 2 and 3 provide a summary of the staff's conclusions.

If you have questions regarding the staff's assessment or actions requested of TVA, please contact me at 301-415-1457.

Sincerely,
/RA/
Patrick D. Milano, Acting Branch Chief
Watts Bar Special Projects Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosures:
1. CAP-SP Status Assessment
2. Table 1, "Corrective Action Program Review Status"
3. Table 2, "Special Program Review Status"

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