



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

June 7, 2012

10 CFR 2.201

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 2  
NRC Docket No. 50-391

**SUBJECT: WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 - REPLY TO NOTICE OF VIOLATION 391/2012612-01 - FAILURE TO CORRECT A CONDITION ADVERSE TO QUALITY ASSOCIATED WITH CONTAINMENT SPRAY PUMP LAYUP AND PREVENTIVE MAINTENANCE**

- References:
1. NRC letter dated May 9, 2012, "Watts Bar Nuclear Plant Unit 2 Construction - NRC Problem Identification and Resolution Inspection Report"
  2. NRC letter dated December 16, 2011, "Watts Bar Nuclear Plant Unit 2 Construction - NRC Integrated Inspection Report 05000391/2011609"

The purpose of this letter is to provide a reply to Notice of Violation 391/2012612-01. Enclosure 1 provides TVA's reply to this violation. Enclosure 2 provides the list of commitments made in this letter.

Because this violation is cited against Appendix B, Criterion XVI, "Corrective Action," it should be noted that general improvements to the corrective action program are being addressed in response to issues identified both internally by TVA and externally by NRC (i.e., NCV 391/2012612-02, "Failure to Correct Longstanding CAP Deficiencies").

JED I  
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U.S. Nuclear Regulatory Commission  
Page 2  
June 7, 2012

If you have any questions, please contact me at (423) 365-2351.

Respectfully,



Raymond A. Hruby, Jr.  
General Manager, Technical Services  
Watts Bar Unit 2

Enclosures:

1. Reply to Notice of Violation
2. List of Commitments

cc (Enclosures):

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Spring City, Tennessee 37381

**ENCLOSURE 1  
WATTS BAR NUCLEAR PLANT  
REPLY TO NOTICE OF VIOLATION 391/2012612-01**

**Description of the Violation**

"10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," states that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

Contrary to the above, the applicant did not promptly correct an NRC identified condition adverse to quality. NCV 05000391/2011609-01 identified four vendor recommended layup and preventive maintenance activities that were not being performed on safety-related containment spray pumps. This discrepancy initially was reported to the applicant on October 5, 2011, and entered into the applicant's corrective action program on October 6, 2011. This discrepancy was identified as an NCV in NRC Inspection Report 05000391/2011609, dated December 16, 2011. On January 12, 2012, the applicant closed its corrective action document associated with the NCV, however, two of the four vendor recommendations (coat the exposed portions of the shafts with rust preventative and store the mechanical seal packages separately after one year of layup) were neither completed nor evaluated.

This is a Severity Level IV violation (Enforcement Policy 6.5.d)"

**TVA Response:**

TVA admits that this violation occurred.

**Reason for the Violation:**

The problems identified in this violation were the result of a failure to properly research the vendor requirements once the NRC inspector identified several Layup and Preventative Maintenance (LUPM) items as having not been performed. Although TVA Procedure 25402-000-GPP-0000-N1304, "System/Component Layup," requires that vendor recommendations be considered, this was not followed in this instance.

During TVA's investigation of this violation, it was found that a procedural weakness exists in that the data sheet used in performance of the System/Component Layup procedure only requires listing of the tasks to be performed, with no specific reference to the procedural step that requires vendor manual consultation. Thus, when the immediate actions of Problem Evaluation Report (PER) 444516 were developed, it was believed that for pumps, the only vendor requirements were the filling of the pump bearing housing with rust-inhibiting lubricating turbine oil and rotating the pump shaft every three months to recoat bearings with lubricant. Had the vendor manual been consulted, then PER 444516 would have referred to all four LUPM items; and closure of the PER would have been contingent upon evidence that all four items had been addressed, rather than the two items that were completed.

Contributing to the delay in implementing thorough corrective action was the fact that TVA did not compare the NRC Inspection Report 05000391/2011609, which TVA received on December 16, 2011, with the PER to ensure all issues had been addressed until March 5, 2012. Had this comparison taken place earlier, the remaining two items

**ENCLOSURE 1  
WATTS BAR NUCLEAR PLANT  
REPLY TO NOTICE OF VIOLATION 391/2012612-01**

that had not been completed may have been identified and corrected. The remaining two items were subsequently addressed by PER 517102.

**Corrective Steps That Have Been Taken And The Results Achieved:**

1. To address the initial four specific hardware issues associated with Containment Spray Pumps, TVA has performed the following:

For Item 1, Work Orders 10616425 and 10616439 were implemented on September 26, 2011, to add the required rust-inhibiting lubricating turbine oil to each of the pump bearing housings. Work Orders 112794808 and 112794832 have been initiated to perform an annual oil inspection for Containment Spray Pumps 2A-A and 2B-B, respectively.

For Item 2, TVA has chosen to leave the mechanical seal packages with the pumps. This decision is based upon engineering evaluation after discussions with a vendor representative. The purpose of this separate storage requirement is to prevent the long-term distortion of the seal package due to pump inactivity, which could lead to damage resulting in seal leakage. Since the pumps must pass startup testing and must demonstrate operability via a surveillance requirement prior to being placed into service upon unit startup, any seal leakage would be identified at that time. If leakage is identified at startup, the seal package will be replaced. Alternatively, if no leakage is found and the pump passes the above testing, then no replacement will be needed.

For Item 3, TVA has generated both LUPM items LUPM0084C and LUPM0083C and Work Orders 113327293 and 113327218 to coat shaft sleeve and exposed portions of shaft with rust preventative for each of the Containment Spray Pumps 2A-A and 2B-B, respectively.

For Item 4, Work Orders 112793258 and 112793362 have been initiated to perform quarterly shaft rotations for Containment Spray Pumps 2A-A and 2B-B, respectively.

2. Interim measures have been taken for TVA's corrective action program and have been incorporated into Nuclear Construction Project Procedure (NC PP) 3, "Watts Bar Unit 2 Corrective Action Program."
3. TVA has revised NC PP-18, "NRC Inspection Preparation and Support," to implement a process to track and document timely review of incoming NRC Inspection Reports to ensure that non-cited violations (NCVs) and unresolved items (URIs) are adequately addressed in the corrective action program. To determine the extent of condition, TVA conducted a review of the remaining outstanding NCVs and URIs to determine if any other items have not been documented with the correction action program. No other issues were identified. In addition, expectations were added to PP-18 to ensure that inspector concerns are properly documented prior to the inspector completing the inspection.
4. TVA is reviewing key safety-related component vendor manuals to determine LUPM requirements and transpose them into work documents and implementation schedules.

**ENCLOSURE 1  
WATTS BAR NUCLEAR PLANT  
REPLY TO NOTICE OF VIOLATION 391/2012612-01**

**Corrective Steps That Will Be Taken**

1. To address LUPM weaknesses initially suggested by the NCV 05000391/2011609-01 from Inspection Report dated December 16, 2011, TVA will issue a revision to existing Procedure 25402-000-GPP-0000-N1304, "System/Component Layup."
2. TVA will conduct briefings for those employees using the revised Procedure 25402-000-GPP-0000-N1304, "System/Component Layup," to ensure that each employee is aware of the requirements and the changes made to this procedure.
3. TVA will continue to review safety-related component vendor manuals to determine LUPM requirements and transpose them into work documents and implementation schedules.

**Date When Full Compliance Will Be Achieved.**

TVA will be in full compliance by September 21, 2012.

4. General improvements to the corrective action program are being addressed in response to issues identified both internally by TVA and externally by NRC (i.e., NCV 391/2012612-02, "Failure to Correct Longstanding CAP Deficiencies"). These improvements are being tracked by PER 522107 within TVA's corrective action program.

The corrective action program updates will be completed in early 2013.

**ENCLOSURE 2  
LIST OF COMMITMENTS**

1. To address LUPM weaknesses initially suggested by the NCV 05000391/2011609-01 from Inspection Report dated December 16, 2011, TVA will issue a revision to existing Procedure 25402-000-GPP-0000-N1304, "System/Component Layup."
2. TVA will conduct briefings for those employees using the revised Procedure 25402-000-GPP-0000-N1304, "System/Component Layup," to ensure that each employee is aware of the requirements and the changes made to this procedure.
3. TVA will continue to review safety-related component vendor manuals to determine LUPM requirements and transpose them into work documents and implementation schedules.

TVA will be in full compliance with the above actions by September 21, 2012.

4. General improvements to the corrective action program are being addressed in response to issues identified both internally by TVA and externally by NRC (i.e., NCV 391/2012612-02, "Failure to Correct Longstanding CAP Deficiencies"). These improvements are being tracked by PER 522107 within TVA's corrective action program.

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