



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

August 21, 2013

CDR-50-391/2013-03

10 CFR 50.55(e)

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 - CONSTRUCTION  
DEFICIENCY REPORT 50-391/2013-03 - FAILURE TO IMPLEMENT PLANT  
CHANGES - FINAL REPORT**

Reference: TVA letter dated July 18, 2013, Watts Bar Nuclear Plant (WBN) Unit 2 - "Reply to Notice of Violation (EA-13-019) 391/2013611-01, -02, and -03 Related to TVA'S Commercial Grade Dedication Program"

The purpose of this letter is to provide the final report for Construction Deficiency Report 391/2013-03 in accordance with 10 CFR 50.55(e) regarding a condition involving failure to implement plant changes. This condition represents a significant breakdown of a portion of the WBN Unit 2 Quality Assurance Program. TVA initially notified NRC of this deficiency on July 22, 2013, via Event Notification No. 49209.

TVA has performed evaluations for the systems where work had not been implemented and determined that the supports would have performed their safety function under normal operating and design basis loads had the additional work remained uncorrected. As a result of these evaluations, TVA has determined that no substantial safety hazards or impacts to safety-related systems, structures or components were identified regarding this issue.

TVA has completed actions to address the hardware and programmatic aspects of the identified conditions. Broader programmatic actions to address the significant breakdown in a portion of the WBN Unit 2 Quality Assurance Program were included in the above Reference.

IE27  
HRR

U.S. Nuclear Regulatory Commission  
Page 2  
August 21, 2013

There are no new commitments made in this letter.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 21<sup>st</sup> day of August, 2013.

If you have any questions, please contact me at (423) 365-1260 or Gordon Arent at (423) 365-2004.

Respectfully,



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

Enclosure:

Construction Deficiency Report 391/2013-03, Failure to Implement Plant Changes -  
Final Report

cc (Enclosure):

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## ENCLOSURE

### WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 REGARDING FAILURE TO IMPLEMENT PLANT CHANGES 10 CFR 50.55(e) - FINAL REPORT 391/2013-03

#### DESCRIPTION OF DEFICIENCY

As a result of an extent of condition review for potential Quality Assurance breakdown issues in response to an apparent violation 05000391/2013611-02 related to TVA's Commercial Grade Dedication Program, TVA has identified a previous Problem Evaluation Report (PER) that constitutes a significant breakdown in a portion of the Quality Assurance program. This review was initiated upon discovery of a misinterpretation of 10 CFR 50.55(e), where it was thought that to be reportable a "significant breakdown in a portion of the Quality Assurance program" had to be associated with a confirmed substantial safety hazard.

The subject of the previous PER is as follows:

Previously, on May 31, 2011, TVA identified a number of revised Drawing Revision Authorizations (DRAs) that had not been incorporated into work orders to ensure field work required by the DRA revision was implemented in the field.

Specific problems initially identified were

- (1) Support 47A450-25-400 - Gaps shown in section A-A of DRA 52504-012 were not re-inspected.
- (2) Support 47A450-25-403 - Dimensions showing the center anchor bolt location on section B-B of DRA 52504-047 were not re-inspected.
- (3) Support 47A450-26-79 - Size of shim plate shown on DRA 52574-011 was not re-inspected.
- (4) Support 47A060-67-139 - Nut was not removed and anchor cut one thread above base plate as shown on DRA 52574-048 and QC re-inspection was not performed.
- (5) Support 47A060-26-78 - Size of shim plate shown on DRA 52574-053 was not re-inspected.

The above conditions were identified during the performance of Quality Assurance surveillance 25402-WBN-SR-11-1741.

This condition was documented as PER 378571. As a result of the above described review, TVA has concluded that a significant breakdown in a portion of the Quality Assurance program had occurred that could have produced a defect in a basic component. However, TVA has subsequently determined that no safety significance can be attributed to this condition. This issue has been resolved, and PER 378571 was closed on February 19, 2013.

This condition is being reported in accordance with 10 CFR 50.55(e) as significant breakdown in a portion of the Quality Assurance program.

### **CAUSE OF THE DEFICIENCY**

The cause of the deficiency was determined to be Procedure 25402-000-GPP-0000-N3105, "Field Change Requests," was ambiguous in that it was not clear whether the current work order has to be revised or a new work order is to be issued for processing Field Change Requests (FCRs) approved with changes. The deficiencies were limited to support related FCRs.

### **SAFETY IMPLICATIONS**

Engineering has performed evaluations for the systems where work had not been implemented and determined that the supports would have performed their safety function under normal operating and design basis loads had the additional work remained uncorrected. These evaluations are also documented in closed PER 378571.

As a result of these evaluations, TVA has determined that no substantial safety hazards or impacts to safety-related systems, structures or components were identified regarding this issue.

### **CORRECTIVE ACTIONS**

#### **Hardware Conditions/Extent of Condition**

For the five System 67 (Essential Raw Cooling Water) supports documented in the PER description above, Work Orders 112369678 (Items 1 and 2 above) and 112369534 (Items 3, 4, and 5) were initiated to address the deficiencies identified. These work orders have been completed.

This condition applies to WBN Unit 2 FCRs that have been approved with changes. TVA has reviewed those identified FCRs on System 67 and the remaining systems to identify changes that were not incorporated into a work order and implemented. To correct the identified issues found, TVA has initiated or revised work orders to implement the new scope of work if required. These actions are documented in closed PER 378571.

Engineering has performed an evaluation for each of the systems where work had not been implemented and determined that the supports would have performed their safety function under normal operating and design basis loads had the additional work remained uncorrected. These evaluations are also documented in closed PER 378571.

#### **Procedure Revision**

TVA has revised Procedure 25402-000-GPP-0000-N3105 to include the steps outlined as follows:

For Field Change Requests (FCRs) that are to be "approved with changes", Design Engineering contacts the mechanical planning group to notify them that the FCR will be issued "approved with changes" prior to issuing the FCR. At the time of notification,

Planning is to initiate a work order to implement the new work in the subject FCR and will provide the work order number to Engineering. Design Engineering will then reference the work order number in the FCR. Design Engineering will still coordinate the FCR with Field Engineering prior to issuance.

Specifically, Procedure 25402-000-GPP-0000-3105 was revised by modifying Section 6.2.2.d to state "If physical work is required, identify the work order number (or work order numbers) that will implement the FCR and (if applicable) the work order numbers that are affected by the change."

### **Training**

Training has been provided to the appropriate Field Engineers, planners and Design Engineering personnel on the revised procedure requirements regarding processing FCRs approved with changes.