



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

May 6, 2013

CDR-50-391/2013-01

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 50-391/2013-01 - COMMERCIAL GRADE
DEDICATION PROGRAM - SECOND INTERIM REPORT**

The purpose of this letter is to provide a second interim Construction Deficiency Report (CDR) 391/2013-01 for a condition affecting certain equipment and/or components identified within TVA's commercial grade dedication program. TVA initially notified NRC of this deficiency on January 3, 2013, via Event Notification No. 48646, followed by a first interim report submitted on January 31, 2013.

Evaluations completed to date have not identified any specific examples in which such commercially dedicated equipment and/or components would have been unable to perform their intended safety functions. Additional testing performed to date has confirmed that the tested components would be acceptable for use as is. Until the evaluation and testing process is complete, the potential exists for a substantial safety hazard determination being identified as a result of this condition.

The root cause of the deficiency was determined to be that TVA's commercial grade dedication program had not been maintained consistent with industry and regulatory standards. Further details of this condition can be found in the updated interim CDR 391/2013-01 provided in Enclosure 1. Further evaluations and any subsequent testing for the affected components are targeted to be complete by June 28, 2013. A final report will be submitted once the process has been completed. In the interim, TVA's system turnover process will prevent equipment and components affected by this condition from being turned over to plant operations prior to the condition being corrected.

IE27
NRR

U.S. Nuclear Regulatory Commission
Page 2
May 6, 2013

Enclosure 2 provides the commitments made in this letter.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 6th day of May, 2013.

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

Respectfully,

A handwritten signature in black ink, appearing to read "R. A. Hruby, Jr.", with a stylized flourish at the end.

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

Enclosures:

1. Construction Deficiency Report (CDR) 391/2013-01, Commercial Grade Dedication Program
2. List of Commitments

cc (Enclosures):

U. S. Nuclear Regulatory Commission
Region II
Marquis One Tower
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NRC Resident Inspector Unit 2
Watts Bar Nuclear Plant
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Spring City, Tennessee 37381

ENCLOSURE 1

WATTS BAR NUCLEAR PLANT (WBN) UNIT 2 REGARDING COMMERCIAL GRADE DEDICATION PROGRAM 10 CFR 50.55(e) CONSTRUCTION DEFICIENCY REPORT (CDR) 50-391/2013-01 SECOND INTERIM REPORT

DESCRIPTION OF DEFICIENCY

TVA has determined that a condition exists where certain commercially dedicated equipment and/or components have been stored or installed that may not meet the required commercial grade dedication (CGD) process.

Evaluations completed to date have not identified any specific examples in which such commercially dedicated equipment and/or components would have been unable to perform their intended safety functions. Additional testing performed to date has confirmed that the tested components would retain this ability. Until the evaluation and testing process is completed, the potential exists for a substantial safety hazard determination being identified as a result of this condition.

CAUSE OF THE DEFICIENCY

The root cause of the deficiency was determined to be that TVA's CGD program had not been maintained consistent with industry and regulatory standards. Contributing to this cause was the cancellation of the initial Bechtel CGD procedure early in the Unit 2 Completion Project when it was found that credit could be taken for CGD packages for a number of items previously prepared under the TVA Nuclear Power Group process. As a result, this removed the CGD process from the scope of WBN Unit 2 Quality Assurance audits and assessments. An additional contributing cause was found to be that the Procurement Engineering Group (PEG) had not been trained to prepare CGD packages in accordance with current industry standards.

Problem Evaluation Report (PER) 403095 was initiated by WBN Unit 2 Engineering following a routine construction NRC inspection to document NRC-identified errors in implementing NEDP-8, "Technical Evaluation for Procurement of Materials and Services," with respect to the CGD process. The PER identified twelve (12) packages with potential deficiencies that raised NRC concerns about the CGD process.

After further inspection, eight (8) packages were found to be acceptable, and no additional actions were determined to be needed for these packages. The remaining four (4) packages identified by the NRC were determined to require additional testing and inspection prior to use at WBN Unit 2. When additional issues were identified during a subsequent NRC inspection, TVA decided to conduct a comprehensive review of the CGD packages potentially applicable to WBN Unit 2. A team of independent and experienced technical personnel was assembled to perform a review of these packages.

The reviews performed to date have not identified any components that would have been unable to perform their intended safety function had the condition not been corrected. However, in some cases, the review concluded that additional testing was warranted to confirm the components would perform their intended function. This testing is approximately 65 percent complete, with test results being acceptable to date.

Regarding the programmatic aspect of this condition, TVA determined that NEDP-8, "Technical Evaluation for Procurement of Materials and Services," did not adequately reflect the definition of critical characteristics included in 10 CFR Part 21. The NEDP-8 definition described critical characteristics for acceptance as those selected to verify that the item received was the item specified (EPRI NP-5652) instead of verifying that the item would perform its intended safety function (10 CFR Part 21). However, in many cases other procedural requirements in NEDP-8 ensured that the required critical characteristics for design were selected based on safety functions and failure modes.

SAFETY IMPLICATIONS

No substantial safety hazard examples have been identified to date. However, until further evaluations and any subsequent additional testing as described above have been completed, the potential exists for a substantial safety hazard determination being identified. Once the final safety significance of this condition is determined, TVA will provide a final CDR.

CORRECTIVE ACTIONS

To address the potential hardware deficiencies, the following actions have been completed or are planned.

1. TVA assembled an independent experienced team of technical personnel and performed a review of CGD packages potentially used by the WBN Unit 2 project. The team reviewed each package against industry practices and regulatory requirements and proposed a disposition for each package. The results of this review were documented in "Commercial Grade Dedication Program, Corrective Action Program, Closure Report."
2. The PEG has revised the CGD packages needing technical revision. Some of these procurement package revisions resulted in additional testing of some items. This testing is approximately 65 percent complete, with test results being acceptable to date.
3. Concurrent with the revision of each CGD package, TVA has examined whether the related commercial grade item which was purchased, received and stored, or installed was impacted. No impacts have been identified to date.
4. Upon completion of this evaluation and testing process, a determination as to safety significance will be completed. A final report will be provided detailing the safety significance of this condition.

To address the programmatic aspects of this condition, the following actions have been completed or are planned.

1. TVA has created and staffed a Corporate Program Manager, PEG, position which reports directly to the General Manager of Engineering Design. TVA has revised NEDP-20, "Conduct of the Engineering Organization," to include roles and responsibilities for this position.
2. TVA has revised NEDP-8 to correct the deficient definition of critical characteristics and provide additional guidance on performing commercial grade dedications.
3. WBN Unit 2 Project PEG personnel have completed EPRI training on CGD programs or have been task qualified to perform CGD by TVA's Engineering Support Personnel Training Program.

ENCLOSURE 2

LIST OF COMMITMENTS

1. Upon completion of the CGD evaluation and testing process, a determination as to safety significance will be completed. These activities are targeted to be complete by June 28, 2013. A final report will then be provided detailing the safety significance of this condition.