



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

March 26, 2013

EA-13-019

Mr. Michael D. Skaggs  
Senior Vice President  
Nuclear Generation Development and Construction  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT UNIT 2 CONSTRUCTION - NRC FOCUSED  
PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT NO.  
05000391/2013611

Dear Mr. Skaggs:

This letter refers to the inspection conducted between December 3 and 7, 2012, and between January 10 and February 14, 2013, at the Watts Bar Nuclear Plant Unit 2. The purpose of the inspection was to perform a focused problem identification and resolution sample of corrective actions for previously noted commercial grade dedication program violations (see NRC Inspection Report 05000391/2011610, [ML12034A202](#)). The enclosed report presents the results of this inspection. An initial exit meeting was held with your staff on December 7, 2012, followed by a teleconference on February 11, 2013, and a final exit meeting on February 14, 2013.

This inspection examined activities conducted under your Unit 2 construction permit as they relate to safety and compliance with the Commission's rules and regulations and with the conditions in your construction permit and fulfillment of Unit 2 regulatory framework commitments. Within these areas, the inspection consisted of a selected examination of procedures and representative records, and interviews with personnel.

Based on the results of this inspection, three apparent violations were identified and are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. One apparent violation relates to a breakdown in the quality assurance program, specifically the commercial grade dedication (CGD) program (Q.1.1.b.1). The breakdown in the CGD program was revealed following an extent of condition review conducted by your contractor in response to a non-cited violation of 10 CFR 50, Appendix B, Criterion III in the previous NRC inspection. The new information identified through the extent of condition review, which was not available at the time of the previous inspection, suggested that the problems with CGD were pervasive enough to indicate a breakdown in the program resulting in multiple examples of construction of unknown quality. The second apparent violation relates to the failure to report the aforementioned breakdown in the quality

assurance program to the Commission (Q.1.1.b.2). The failure to report the quality assurance breakdown was noted during this focused problem identification and resolution inspection. The third apparent violation relates to the failure to identify the breakdown in the quality assurance program as a significant condition adverse to quality (Q.1.1.b.3). The failure to identify the significant condition adverse to quality was also noted during this problem identification and resolution inspection.

Before the NRC makes its enforcement decision, we are providing you an opportunity to: (1) respond to the apparent violations addressed in this inspection report within 30 days of the date of this letter, or (2) request a Pre-decisional Enforcement Conference (PEC), or (3) request an alternate dispute resolution (ADR) with the NRC. In presenting your corrective actions, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violations.

If you choose to provide a written response, it should be clearly marked as a "Response to Apparent Violations in Inspection Report No. 05000391/2013611; EA-13-019," and should include for each apparent violation: (1) the reason for the apparent violation, or, if contested, the basis for disputing the apparent violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a predecisional enforcement conference.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on the apparent violations and any other information that you believe the NRC should take into consideration before making an enforcement decision. The topics discussed during the conference may include the following: information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned to be taken. If you decide to participate in a PEC, please contact Scott Freeman at 404-997-4437 within 10 days of the date of this letter. A PEC should be held within 30 days of the date of this letter. Please be aware that the conference will be open for public observation and the NRC will issue a press release to announce the time and date of the conference.

As discussed in Federal Register Notice 78 FR 14843-14844, dated March 7, 2013, the NRC began implementation of a one-year pilot program to expand the scope of post-investigation ADR, to include all escalated non-willful (traditional) enforcement cases with the potential for civil penalties. Because the enforcement aspects of the above matter include the potential for a civil penalty, you may also request ADR with the NRC in an attempt to resolve this issue. ADR is a general term encompassing various techniques for resolving conflicts outside of court using a neutral third party. The technique that the NRC has decided to employ is mediation. Additional information concerning the NRC's ADR program can be obtained at <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr.html>. The Institute on Conflict Resolution at Cornell University has agreed to facilitate the NRC's program as a neutral third party. Please contact the Institute on Conflict Resolution at 877-733-9415 within 10 days of the date of this letter if you are interested in pursuing resolution of this issue through ADR.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available

electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

If you have any questions concerning this matter, please contact Scott Freeman of my staff at 404-997-4437.

Sincerely,

**/RA/**

Jimi T. Yerokun, Director  
Division of Construction Inspection

Docket No. 50-391  
Construction permit No. CPPR-92

Enclosure:  
Inspection Report 05000391/2013611

cc w/encl:

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Jimi T. Yerokun, Director  
Division of Construction Inspection

Docket No. 50-391  
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Enclosure:  
Inspection Report 05000391/2013611

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SIGNATURE	*ECM2	NDK1 Via email	JXH13 Via email	CFE	RCH	MSF1	MKG1/RXF via email
NAME	E. Michel	N. Karlovich	J. Heisserer	C. Evans	B. Haag	S. Freeman	M. Halter/R. Fretz
DATE	3/1/2013	2/28/2013	2/27/2013	3/6/2013	3/6/2013	3/6/2013	3/20/2013
E-MAIL COPY	YES   NO	YES   NO	YES   NO	YES   NO	YES   NO	YES   NO	Yes   NO

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cc: continued on page 5

cc: continued from page 4

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No: 50-391

Construction Permit No: CPPR-92

Report No: 05000391/2013611

Applicant: Tennessee Valley Authority (TVA)

Facility: Watts Bar Nuclear Plant, Unit 2

Location: 1260 Nuclear Plant Rd  
Spring City, TN 37381

Dates: December 3 - 7, 2012, and January 10 - February 14, 2013

Inspectors: J. Heisserer, Senior Construction Inspector, Construction  
Inspection Branch (CIB) 3, Division of Construction Inspection  
(DCI) Region II (RII)  
E. Michel, Senior Construction Inspector, CIB3, DCI, RII  
N. Karlovich, Construction Inspector, CIB1, DCI, RII

Approved by: M. Scott Freeman, Chief  
Construction Inspection Branch 3  
Division of Construction Inspection

Enclosure

## EXECUTIVE SUMMARY

### Watts Bar Nuclear Plant, Unit 2

This focused problem identification and resolution inspection included aspects of commercial grade dedication activities performed by TVA associated with the Watts Bar Nuclear (WBN) Plant Unit 2 construction project. This report covered a one-week period on-site, and several weeks of off-site inspection in the areas of quality assurance, commercial grade dedication, and identification and resolution of construction problems. The inspection program for Unit 2 construction activities is described in NRC Inspection Manual Chapter 2517, Watts Bar Unit 2 Construction Inspection Program. Information regarding the WBN Unit 2 construction project and NRC inspections can be found at <http://www.nrc.gov/info-finder/reactor/wb/watts-bar.html>.

### **Inspection Results**

- (TBD) The NRC identified an apparent violation (AV) of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the failure to provide adequate measures for the selection and review for suitability of basic components dedicated through the commercial grade dedication program. (Section Q.1.1.b.1)
- (TBD) The NRC identified an AV of 50.55(e)(4) for the failure to report a significant breakdown in the quality assurance program. (Section Q.1.1.b.2)
- (TBD) The NRC identified an AV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to identify a significant condition adverse to quality. (Section Q.1.1.b.3)



## REPORT DETAILS

### I. QUALITY ASSURANCE PROGRAM

#### Q.1 Quality Assurance (QA) Oversight Activities

##### Q.1.1 Inspection of Criterion XVI – Corrective Action (IP 35007), Focused PI&R, Commercial Grade Dedication

###### a. Inspection Scope

The inspectors reviewed Problem Evaluation Report (PER) 403095 which was written in response to Unresolved item (URI) 05000391/2011607-02, "Commercial Grade Dedication Program," (ML112730197) and updated after the issuance of non-cited violation (NCV) 05000391/2011610-01, "Commercial Grade Dedication Program Deficiencies" (ML12034A202) to evaluate the applicant's response in the following areas:

- Classification, prioritization, and evaluation for reportability (i.e., 10 CFR 50.55(e)) of conditions adverse to quality;
- Screening of the items entered into the corrective action program to determine the proper level of evaluation;
- Complete and accurate identification of the problem in a timely manner commensurate with its significance and ease of discovery;
- Consideration of extent of condition, generic implications, common cause, and previous occurrences;
- Classification and prioritization of the resolution of the problem commensurate with its safety significance; and
- Identification of root and contributing causes, as well as actions to preclude recurrence for significant conditions adverse to quality

The inspectors reviewed updated commercial grade dedication (CGD) packages and associated technical evaluations to evaluate the adequacy of corrective actions completed to date in response to the NCV. The CGD packages reviewed included the procurement data sheets (PDS) and X-packages for one coupling, one gauge, one valve, one lever, two tip jacks, and five fuse holders. PDS were documents used by procurement for dedicating items purchased from commercial, non-Appendix B suppliers. X-packages were created to identify additional critical characteristics and verification requirements needed to provide reasonable assurance that items previously dedicated and accepted by the applicant prior to implementing corrective actions to the NCV (PER 403095) would perform their intended safety functions.

Specifically, the inspectors interviewed the engineers working on the packages and reviewed the technical evaluations to verify that they were identifying the items' safety functions and performance requirements, and were identifying credible failure modes for items. The inspectors reviewed the CGD packages and technical evaluations to verify that they were choosing critical characteristics based on the intended safety function and the credible failure modes. The inspectors also reviewed the CGD packages to verify that the testing standards specified were appropriate for the critical characteristics. The inspectors reviewed the X-packages and two associated material receiving reports

(MRR) to verify that the sample size and sampling plans for testing were in accordance with nationally recognized industry standards, and had an adequate, documented technical basis. The MRRs were also reviewed to verify that they documented the verification of critical characteristics as stated in the X-packages. The inspectors compared the X-packages to the updated PDS to verify that they were covering the same critical characteristics.

The inspectors reviewed the licensee's extent of condition report, "Commercial Grade Dedication Program Corrective Action Program Detailed Review Closure Report." The report was conducted by an independent third-party expert, and the inspectors held discussions with the applicant's staff regarding the details and conclusions drawn.

b. Observations and Findings

The inspectors identified the following three apparent violations (AV):

1. Introduction: The NRC identified an apparent violation of 10 CFR 50, Appendix B Criterion III, Design Control, for failure to establish measures for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of SSCs. This resulted in a significant breakdown of the QA program related to CGD.

Description: In 2011, the NRC conducted an inspection at Watts Bar 2 (WB2) which resulted in a Severity Level (SL) IV NCV of Criterion III, Design Control, for failure to incorporate the 10 CFR 21 definition of critical characteristics into the applicant's CGD procedure and therefore failed to assure the suitability of application of the commercial grade items' safety functions (Inspection Report (IR) 05000391/2011610, [ML12034A202](#)). At the time, the inspectors identified a sample of inadequate dedications that failed to provide reasonable assurance that commercial grade items would perform their intended safety function. In addition, the inspection report noted the lack of QA oversight in the area of CGD. Specifically, the inspectors' review of an apparent cause evaluation concluded that the applicant had not performed any audits, surveillances, or assessments of the CGD activities since the project was turned over to a contractor (Bechtel) in 2008. The inspectors also found that Bechtel had not performed a CGD program audit and that surveillance activities had not reviewed the content of the CGD technical evaluations to determine whether critical characteristics were being selected to provide reasonable assurance that the item being dedicated would perform its intended safety function.

As a result of the above stated NCV, the applicant conducted an extent of condition review that included a review of all commercial grade items used at WB2. The review included an evaluation of the technical evaluations (TE) for the commercial grade items. A TE was the engineering document which established the quality and technical requirements of an item. For commercial grade items, TEs included information such as safety function, postulated failure modes, critical characteristics, seismic requirements, etc. In other words, a TE was part of the Criterion III measure established for the selection and review for suitability of application of materials, parts, equipment, and processes that were essential to the safety-related functions of the structures, systems, and components (commercial grade items, in this case). The applicant evaluated 94 TEs, and concluded that 60 failed to address the quality

and technical requirements by inadequately identifying items such as safety functions, proper critical characteristics, and/or acceptance methods.

The TEs were used to generate a total of 536 PDS. A PDS translated the technical and quality requirements defined in the associated TE into a document used for procurement. Some TEs had only one PDS associated with them, while others had hundreds of associated PDSs. The applicant evaluated all 536 PDS and concluded that 489 of them (91%) required some form of additional verification to provide reasonable assurance that the items procured from those PDS would perform their intended safety function. The types of additional verification activities required included identification of additional critical characteristics, testing such as positive verification of material properties in lieu of visual inspection, and verification of the validity of commercial grade surveys.

In some cases components were procured using the PDS. Each PDS could be used to procure multiple items for safety related applications. For example, PDS TIIC No. CEE179A for 2" water regulating valves was used to procure a total of 2 valves; and PDS TIIC No. CQE005A for roller-type limit switches was used to procure a total of 40 switches. At the time this report was issued, the total quantity of purchased items was still being determined. Additionally, it was determined that components procured using 295 of the 536 PDS (55%) required some form of additional testing.

The following is a sample of re-verification identified by the applicant as part of the extent of condition and reviewed by the inspectors in December 2012:

- Lever for limit switch (CQE005A): The original critical characteristics for this item included part number, manufacturer, configuration, and material verification via visual inspection /magnetic test, which did not provide reasonable assurance that the item would perform its safety function. As part of the corrective actions, the applicant removed part number and manufacturer as critical characteristics, and added dimensions with appropriate tolerances and destructive material testing to provide reasonable assurance that the lever for the limit switch would perform its safety function. Specifically, for material verification, a test was performed to verify that the item exhibited no deformation, fracture, cracking or buckling after the lever arm was torque tested to 1.5 times the maximum torque state for the lever. Twenty of these items were issued and installed through a work order related to the safety-related control and auxiliary vent power system.
- Coupling (PDS BBT407L): These couplings were intended for use in room coolers for the containment spray pumps and charging pumps, which have a safety-related function. The applicant identified that the original testing of the material ID critical characteristic, by use of magnet, was insufficient. As part of the corrective actions, the applicant revised testing for material ID to include verification the material was grade 1215 carbon steel per ASTM A29, and to verify that the material exhibited minimum tensile or yield strength of grade 1215 carbon steel per ASTM A29. Four of the five items received were issued on WO# 09-953185-000, and the CGD package indicated that they were installed.
- Fuse Holders (BTP582K): The applicant identified that the original critical characteristics for this item did not contain provisions for verifying chemical or

physical material properties of the metallic or nonmetallic materials. As part of the corrective actions, the applicant revised the critical characteristics and included termination hardware strength, fuse clip strength, material, and insulation resistance. Fifteen items were issued on WO# 08-951063-007 to Location 7031474, which was associated with a main control room panel. At least one fuse holder was installed.

- Insulated Tip Jacks (CGA883Y, CGA880G): The applicant identified that there were no critical characteristics for material verification or dielectric strength to provide assurance of circuit integrity. Instead the PDS packages only identified manufacturer, manufacturer part number, and color code. As part of the corrective actions the applicant revised the list of critical characteristics to include material and dielectric strength to be tested per their respective ASTM standards. For the red insulated tip jacks, 25 items had been issued and were installed under WO# 111149755, which was associated with a reactor trip switchgear panel.

The inspectors considered this a programmatic breakdown of the CGD program, and therefore the QA program, based on the substantial nature of the extent of condition; and was the result of an inadequate procedure and inadequate oversight by the applicant.

The inspectors determined that these issues were more than minor in accordance with Inspection Manual Chapter (IMC) 2517 because they represented an inadequate quality oversight function which, if left uncorrected, could adversely affect the quality of construction, testing, analysis, or records for a safety-related SSC component. This issue represented a breakdown in the applicant's QA program for construction related to commercial grade dedication that involved inadequate oversight and entailed multiple examples of construction of unknown quality as the result of inadequate program implementation. Based on the examples of violation in Section 6.5 of the NRC Enforcement Policy, and discussion in other areas of the Enforcement Policy, the severity level of this apparent violation is potentially greater than Severity Level IV.

Enforcement: 10 CFR 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures be established to assure that applicable regulatory requirements are correctly translated into specifications, drawings, procedures, and instructions; and that measures be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the SSCs.

10 CFR 21 defines the dedication process for turning commercial grade items into basic components and states that dedication is an acceptable process undertaken to provide reasonable assurance that a commercial grade item to be used as a basic component will perform its intended safety function and, in this respect, is deemed equivalent to an item designed and manufactured under a 10 CFR 50, Appendix B, QA program. The assurance is achieved by identifying critical characteristics of the

items and verifying their acceptability by inspections, tests, or analysis. 10 CFR 21 defines critical characteristics, in part, as those important design, material, and

performance characteristics of a commercial grade item that, once verified, will provide reasonable assurance that the item will perform its intended safety function.

Contrary to the above, prior to December 2, 2011, the applicant failed to assure that applicable regulatory requirements for CGD contained in 10 CFR Part 21 were correctly translated into specifications, drawings, procedures, and instructions; and failed to adequately establish measures for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the SSCs. Specifically, the applicant failed to translate the 10 CFR 21 definition of critical characteristics into NEDP-8, "Technical Evaluation for Procurement of Materials and Services," Rev. 0018, which resulted in insufficient measures for selection of material, parts and equipment essential to safety related functions. This deficiency resulted in 91% of all PDS's failing to meet requirements, and is thereby indicative of a breakdown in the QA program. The safety significance of this finding is not yet finalized. The applicant has ceased purchase and installation of any dedicated items using the affected PDS's pending review, and is conducting full re-verification activities. This issue is documented in the applicant's corrective action program as PER 403095.

Pending determination of safety significance, this finding is identified as an apparent violation: AV 05000391/2013611-01, Commercial Grade Dedication Program Breakdown.

2. Introduction: The NRC identified an apparent violation of 50.55(e)(4), Notification, for failure to notify the NRC after obtaining information that reasonably indicated that a portion of the QA program had undergone a significant breakdown. Specifically the QA breakdown was in the area of CGD.

Description: 10 CFR 50.55(e)(4)(iii) required the applicant to notify the Commission of a breakdown in the QA program once they obtain information reasonably indicating the QA program has undergone any significant breakdown which could have produced a defect in a basic component. These breakdowns in the QA program were reportable whether or not the breakdown actually resulted in a defect in a design approved and released for construction, installation, or manufacture.

The inspectors noted that procedure NC-PP-3, Watts Bar Unit 2 Corrective Action Program, Rev 15. required PERs to be returned to the Project Review Committee/Construction Completion Management Review Committee (PRC/CCMRC) for upgrading and reportability screening when a condition was found to be more significant than initially reported. An action step in PER 403095 also specifically noted that the results of the extent of condition review should be brought back to the CCMRC. That step was closed in June 2012, and the PER was never brought back for review for upgrade or reportability screening. In addition, the inspectors interviews with staff and review of the reportability screening criteria in NC-PP-13, NRC Reporting Requirements, Appendix C, indicated that a significant breakdown in any portion of the QA program conducted pursuant to the requirements of 10 CFR 50, Appendix B, which could have produced a defect in a basic component, alone, was not a sufficient condition to make a report to the Commission. Specifically, the aforementioned breakdown would also need to be coupled with a substantial safety hazard; however breakdowns in the QA program

were reportable whether or not the breakdown actually resulted in a defect in a design approved and released for construction, installation or manufacture. As a result of the failure to rescreen PER 403095, and the inadequate NC-PP-13 reportability screening criteria, no notification per 50.55(e) was made to the NRC on breakdown in the QA program.

The inspectors considered the issue identified in PER 403095 to be reportable as a significant breakdown in the QA program that could have produced a defect in a basic component because of the extensive extent of scope and scale for which re-verification was required, and because the deficiencies identified in the PER were associated with errors in the procedure used for performing CGD. CGD applied to those design and construction activities affecting the safety of plant operations, including activities such as design control and receipt inspection. The applicant's inadequate procedure (NEPD-8) made it difficult to determine whether quality requirements of commercial grade items had been met, and as a result extensive evaluation and testing was required to establish that those requirements had been met.

The inspectors determined that this issue was more than minor in accordance with Inspection Manual Chapter (IMC) 2517 because of the potential impact to the regulatory process. In this case, because the NRC was not promptly made aware of this information through the reportability requirements of 10 CFR 50.55(e), the Agency did not have the opportunity to fully and promptly review, assess, and develop timely regulatory responses, including but not limited to consideration of substantial further inspection or NRC management inquiry. Based on a review of the examples of violation in Section 6.9 of the NRC Enforcement Policy, and discussion in other areas of the Enforcement Policy, the severity level of this apparent violation is potentially greater than Severity Level IV.

The finding is related to the Resources component of the Human Performance cross cutting area, as defined in IMC 0310, because the reportability procedure NC-PP-13 was incomplete (H.2(c)). Specifically, NC-PP-13 did not adequately reflect the requirements of 50.55(e)(3) in that QA program breakdowns are reportable whether or not the breakdown actually results in a defect. The inadequate procedure contributed to these programmatic breakdowns not being reported to the NRC.

Enforcement: 50.55(e)(4)(iii) states that "The holder of a facility construction permit subject to this part, combined license, or manufacturing license, who obtains information reasonably indicating that the quality assurance program has undergone any significant breakdown discussed in paragraph [(e)(3)(iii)(C)] of this section must notify the Commission of the breakdown in the quality assurance program through a director or responsible officer or designated person as discussed in paragraph (4)(v) of this section."

Contrary to the above, in May 2012 the applicant obtained information reasonably indicating that the quality assurance program had undergone a significant breakdown which could have produced a defect in a basic component and did not notify the Commission. The safety significance of this finding is not yet finalized. The applicant has submitted two reports to the Commission: one to the Headquarters Operations Officer (EN 48646), and an interim report (ML13037A455), although neither report

explicitly acknowledges a significant programmatic breakdown. This issue is documented in the applicant's corrective action program in PERs 653080, 653083 and 653077.

Pending determination of safety significance, this finding is identified as an apparent violation: AV 05000391/2013611-02, Failure to Make Required 50.55(e) Report.

3. Introduction: The NRC identified an apparent violation of 10 CFR 50 Appendix B Criterion XVI, "Corrective Action," for failure to identify, document the cause and corrective actions, and report a significant condition adverse to quality (SCAQ) to appropriate levels of management.

Description: The inspectors reviewed PER 403095 and noted that it was screened as a level C PER in July 2011. A level C PER was consistent with NC-PP-3, Watts Bar 2 Corrective Action Program, Rev. 15, for a condition adverse to quality (CAQ) and appropriate for "routine problems or adverse conditions that require documentation of corrective actions." After NRC inspection in December 2011, the corrective actions for the PER were expanded to include an extent of condition review of all WBN2 CGD packages. This was completed in May 2012 and identified that 91% of 536 PDSs required re-verification to provide reasonable assurance that any procured commercial grade items would perform their intended safety function. Given the large scope and scale of the extent of condition, the inspectors questioned whether the original level C screening remained consistent with NC-PP-3 classifications as a CAQ, or should have been reevaluated as a significant condition adverse to quality (SCAQ). The inspectors also questioned the completion of step 3.2.2.D.15 of procedure NC-PP-3, which states that a PER shall be returned for screening if, during the development of the extent of condition, the condition is found to more significant than initially reported.

On December 6, 2012, PER 403095 was brought back to the CCMRC and re-screened as a level A PER, consistent with a SCAQ, because it represented "a programmatic or process breakdown that places doubt on the integrity of the affected program." A level A PER required a root cause evaluation to be performed, and corrective actions to prevent recurrence to be identified and implemented. The inspectors concluded from this that the applicant missed the identification of a SCAQ from May 2012 until questioned by inspectors in December 2012.

The inspectors determined that these issues were more than minor in accordance with Inspection Manual Chapter (IMC) 2517 because they represented an inadequate quality oversight function which, if left uncorrected, could adversely affect the quality of construction, testing, analysis, or records for safety-related SSCs. Based on a review of the examples of violation in Section 6.5 of the NRC Enforcement Policy, the severity level of this apparent violation is potentially greater than Severity Level IV.

The finding is related to the Work Practices component of the Human Performance cross cutting area, as defined in IMC 0310, because the applicant did not effectively communicate the requirement to PER owners to bring the PER back for screening (H.4(b)). Specifically, the owners of the PER were not aware that the corrective action procedure contained requirements to bring PERs back for screening when more significant than initially reported.

Enforcement: 10 CFR 50 Appendix B Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that in the case of a SCAQ, that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of a SCAQ, the cause of the condition, and the corrective action taken shall be documented and reported to the appropriate levels of management. Contrary to the above, the breakdown in the CGD process was not identified as a SCAQ following the extent of condition review from May, 2012 through December 2012. The safety significance of this finding is not yet finalized. This issue is documented in the applicant's corrective action program as PER 653080.

Pending determination of safety significance, this finding is identified as an apparent violation: AV 05000391/2013611-03, Failure to Identify Significant Condition Adverse to Quality.

c. Conclusion

The inspectors identified three AV's regarding a breakdown in the QA program related to CGD. Further inspection will be needed to fully evaluate corrective actions associated with the applicant's commercial grade dedication activities.



**Documentation**X-packages

CGA883Y-X Inventory Action Items for CGA883Y IAW PER 403095, Rev. 0  
 BBT407L-X Inventory Action Items for BBT407L IAW PER 403095, Rev. 1  
 CGA880G-X Inventory Action Items for CGA880G IAW PER 403095, Rev. 0  
 BLR554K-X Inventory Action Items for BLR554K IAW PER-403095, Rev. 0  
 CQA452B-X Inventory Action Items for CQA452B IAW PER-403095, Rev. 0  
 CNY354E-X Inventory Action Items for CNY354E IAW PER-403095, Rev. 0  
 CJE367G-X Inventory Action Items for CJE367G IAW PER-403095, Rev. 0  
 BTP582K-X Inventory Action Items for BTP582K IAW PER-403095, Rev. 0  
 CQD463L-X Inventory Action Items for CQD463L IAW PER-403059, Rev. 0  
 CQE005A-X Inventory Action Items for CQE005A IAW PER-403059, Rev. 0  
 CEE179A-X Inventory Action Items for CEE179A IAW PER-403059, Rev. 0

PDS

CGA883Y, Black insulated standard tip jack, Rev. 2  
 BBT407L, Coupling bushed sleeve type, Rev. 2  
 CCA880G, Red insulated standard tip jack, Rev. 2  
 BLR554K, Fuse Holder, Rev. 4  
 BLR5554K, Fuse Holder, Rev. 5  
 CQA452B, Fuse Block, Rev. 1  
 CNY354E, Fuse Block, Rev. 2  
 CJE367G, Fuse Block, Rev. 4  
 BTP582K, Fuse Holder, Rev. 3  
 CQD463L, Gauge, Rev. 2  
 CQE005A, Lever, Rev. 2  
 CEE179A, Valve, Rev. 5

Tech evaluation

2001-52288A, Tip Plugs/Jacks, Rev. 2  
 2000-41755, Coupling, Rev. 2  
 2001-52288A, Tip Plugs/Jacks, Rev. 2  
 9400057283M000, Fuseholders, Rev. 4  
 9400057283M000, Fuseholders, Rev. 3  
 G5920-2-049, Fuse blocks, fuse clips & Fuseholders mild environment only, Rev. 5  
 WBC5940-2-001, Fuse Blocks, Fuse clips & Fuseholders mild environment only, Rev. 3  
 DCN51105M2, Bussmann Fuse Blocks, Fuse clips & Fuseholders mild environment only, Rev. 1  
 FMR-JL01?00005, Level gauge for safety injection pump oil reservoir, Rev. 2  
 FMR-JV15-00015M0, Metallic arm or lever for limit switch – Namco, for use in mild environments, Rev. 2  
 9800085089, Temperature control valve, Rev. 4

Material Receiving Report

MRR 15059 Jack Plugs 7/22/10 associated with PO132245  
 MRR 5061 Couplings

Other

DS-C1.2.11 TVA Nuclear Engineering Civil Design Standard, Rev. 5

Commercial Grade Dedication Program Corrective Action Program Detailed Review Closure Report, May 16, 2012.

Procedures

NC-PP-3, Watts Bar Unit 2 Corrective Action Program, Rev. 15

NC-PP-13, NRC Reporting Requirements, Rev. 3

PERs

403095

653077

653080

653083