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JUL 31 1991

U.S. Nuclear Regulatory Commission
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Gentlemen:

In the Matter of the Application of)
Tennessee Valley Authority) Docket Nos. 50-390
50-391

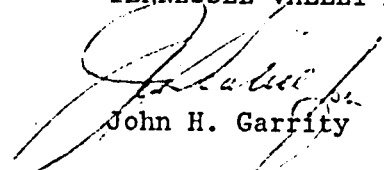
WATTS BAR NUCLEAR PLANT (WBN) - UNITS 1 AND 2 - NRC INSPECTION REPORT
50-390, 391/91-04 - SUPPLEMENTAL RESPONSE TO NOTICE OF VIOLATION
50-390, 391/91-04-03

By letter of June 7, 1991, TVA provided a response to the subject violation. In that letter TVA committed to perform additional evaluations in order to determine the impact of using outdated procedures to perform work. Additionally, TVA committed to provide a supplemental response summarizing the evaluation results by July 31, 1991. Enclosure 1 provides our response. Enclosure 2 lists the commitments for this submittal.

If there are any questions, please telephone P. L. Pace at (615) 365-1824.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


John H. Garrity

Enclosures

cc: See page 2

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U.S. Nuclear Regulatory Commission

JUL 31 1991

cc (Enclosures):

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ENCLOSURE 1
WATTS BAR NUCLEAR PLANT (WBN)
SUPPLEMENTAL RESPONSE TO NOTICE OF VIOLATION
50-390, 391/91-04-03

The following discussion summarizes the results of TVA's actions to date to satisfy commitments made in TVA's June 7, 1991 response to the Notice of Violation (NOV).

COMMITMENT NUMBER 1:

TVA will complete the evaluations for 152 items (23 indeterminate and 129 unevaluated) by July 15, 1991.

RESULTS:

As discussed in TVA's response to the NOV, TVA determined that 382 open procedure items¹ were either (1) late when incorporated into WBN site procedures (e.g., closed late) or (2) late and not dispositioned as of May 28, 1991 (date when work procedures were placed in HOLD). To date WBN has evaluated all of the 382 items including the above 152 items. The results of 379 of these evaluations found there is no indication of any adverse impact on plant hardware. This was due to the changes being administrative in nature, related to nonquality-related processes, technical enhancements, clarifications, the addition of options, and/or a relaxation of requirements. Some changes were more restrictive, but further evaluation determined that no work was performed with the affected procedures while they were delinquent.

The three remaining items require additional reviews of work documents and involve three separate electrical issues having a potential for an impact on plant hardware. Significant Corrective Action Report (SCAR) WBP 900131SCA had previously documented the condition of delinquent incorporation of G-Specs and Specification Revision Notices (SRNs) into applicable construction procedures and tracks these three items which are discussed below. The corrective action plan (if required) to disposition these three issues will be developed and approved by August 31, 1991, and tracked to completion under SCAR WBP 900131SCA.

ITEM D-2868 (SRN-60 to G-38) - Added requirements for KAPTON splicing.

Delinquent procedure - CPI-8.1.8-E-100-A
Delinquent time period - February 2, 1990 to July 9, 1990

SRN-G-38-60 added criteria for Kapton insulated pigtailed and requirements for Kapton insulated Conax conductor seal assemblies. All class 1E primary containment penetration Kapton insulated pigtailed were reinspected and repaired, as required, under workplans C-WBP890302-01, 02, and 03 which contained the requirements of SRN-G-38-60. Therefore, no further actions are required for these pigtailed. With regard to Kapton insulated Conax conductor seal assemblies, there were no apparent work activities performed during the delinquent period. However, to provide assurance that plant hardware is not adversely affected by the delinquent CPI-8.1.8-E-100-A, all workplans (approximately 88) that could potentially involve these seal assemblies during the delinquent time period will be reviewed to determine any necessary corrective action.

1. Each ITEM involves notification to a site department of an upper-tier document change. Multiple items may exist for each change. The violation response may have been unclear in stating there were 382 late implemented changes to upper-tier documents. There were actually 382 late ITEMS and substantially less late upper-tier documents.

ITEM D-2909 (SRN-61 to G-38) - Revised requirements for cable pullby/pullback and changed requirements for megger tests under certain conditions.

Delinquent procedure - CPI-8.1.8-E-102

Delinquent time period - December 16, 1989 to March 26, 1990

SRN-G-38-61 changed the maximum pull tension values for cable pullbys and pullbacks from 500 to 400 lbs. This change in maximum pull tension may have affected many inspections during the delinquent time period. All workplans (approximately 72) dealing with cable pullbys and pullbacks during the delinquent time period will be reviewed to determine the actual value used for maximum pull tension.

SRN-G-38-61 also revised cable pullback requirements to state that all cables in the conduit segment shall be pulled back at one time when performing cable pullbacks. This requirement may have affected the pullback method for many cables during the delinquent timeframe. All workplans (the same 72 as above) dealing with cable pullbacks during the delinquent time period will be reviewed to determine the pullback method utilized.

SRN-G-38-61 also stated that for low voltage power cables (V4), the pullby cables, existing cables, and cables pulled back and repulled shall have their insulation resistance measured by a 500V DC insulation resistance meter (megger). Previously, low voltage power cables were only meggered if their conduit length was greater than 25 feet and contained more than one equivalent 90° bend. All workplans (the 72 above) dealing with cable pullbys, existing cables, pullbacks and repulls during the delinquent period shall be reviewed to determine if all low voltage power cables have been meggered.

Other changes by SRN-G-38-61 did not change the inspection criteria contained in CPI-8.1.8-E-102 and therefore did not impact plant hardware.

ITEM D-4059 (Revision 9 to G-38) - Required that cable pullbys shall not be performed in conduit containing silicon rubber insulated cable.

Delinquent procedure - CPI-8.1.8-E-102

Delinquent Time period - May 24, 1990 to July 5, 1990

G-38 Revision 9 stated that pullbys shall not be performed in conduit containing silicon rubber insulated cable. This change in criteria may have affected cable pullbys during the delinquent time period. Therefore, a review of 48 workplans involving cable pullbys during the delinquent time period shall be performed to determine if pullbys were made in conduit containing silicon rubber insulated cable.

COMMITMENT NUMBER 2:

By June 30, 1991, late items will be dispositioned in accordance with Site Standard Practice (SSP)-2.4.

RESULTS:

This commitment was accomplished on time. To date, performance in the area of upper-tier document implementation has been substantially improved and continues to be monitored by management. Currently, less than 5 items are outstanding, most of which are in HOLD as result of WBN's stop work order.

COMMITMENT NUMBER 3:

An evaluation is also required to determine whether upper-tier documents outside the scope of the SSP-2.4 process have been delinquent, and if so, whether the delinquency impacts plant hardware. This evaluation will be complete by July 15, 1991.

RESULTS:

There are four WBN site organizations which have items (procedure hierarchys) outside the scope of SSP-2.4. They are Nuclear Engineering, Site Quality Assurance (SQA), Document Control and Records Management (DCRM), and Training. These processes are briefly described below, and for the most part are administrative in nature. Each organization performed an evaluation of these processes and, with the exception of Quality Construction Procedures (QCPs), determined there was no impact on the plant. TVA's evaluation of the impact of delinquent QCPs found little likelihood of an adverse impact on plant hardware. However, as discussed herein and summarized in Enclosure 2 (commitment number 2), an additional assessment is necessary for a population of QCPs which were inactive and not included in the scope of the above QCP review.

Nuclear Engineering

Nuclear Engineering Procedures (NEPs) originate within Corporate Engineering and impose requirements on the onsite Engineering Projects (staffs) at each of TVA's nuclear sites. NEPs are implemented either directly by the Watts Bar Engineering Project or by Watts Bar Engineering Procedures (WBEPs) which incorporate additional site specific requirements or guidance. WBEPs do not change requirements in the NEPs; they only supplement the NEPs. Therefore, any revision made to the NEPs is automatically a requirement for project personnel. Close coordination between corporate and site Nuclear Engineering personnel ensure that proposed changes to NEPs are reviewed and that approved versions of revised NEPs are incorporated into the WBEPs in a timely manner. Further, WBEPs are process/administrative procedures pertaining only to personnel in the Watts Bar Engineering Project and have no direct impact on plant hardware. A review of over 30 changes and/or revisions made to NEPs in 1991 confirmed that affected WBEPs were revised to implement the NEP revisions in timely fashion.

Quality Assurance

There are generally three categories of procedures used by the Quality Assurance organization which are not tracked under the SSP-2.4 process. These are discussed below.

Model Inspection Plans (MIPs)

MIPs are used as guidelines in the preparation and review of plant procedures. The MIPs reference the ANSIs and G-Specs to identify types of inspections and represent an additional method for Quality Assurance personnel to review the quality of procedures. However, the actual procedures used to control plant activities (e.g., modification, inspection, etc.) independently implement upper-tier requirements. Failure to maintain the MIPs would not adversely affect plant hardware.

Quality Method Instructions (QMIs)

QMIs implement requirements of upper-tier documents that are applicable to the WBN Quality Assurance Department. The majority of QMIs are administrative in nature and would have little or no direct impact on the quality of plant hardware. There are currently 11 active QMIs concerning activities such as quality control inspection reports, trend analysis, and monitoring. As of May 1991, these QMIs have been included in the SSP-2.4 site procedures matrix. Prior to then, there was no formal method to ensure upper-tier requirements were incorporated into the QMIs. An evaluation was performed of three QMIs: QMI 810.3 "QC Inspection Reports," QMI 810.11 "Administrative and Procedural Requirements for NDE," and QMI 812.1 "Control and Calibration of Tools, Gauges, Instruments, and Measuring Devices." The results of this review found that based on requirements being either administrative, containing no acceptance criteria, or unaffected by upper-tier revisions, or because of procedure non-use, the failure to update the QMIs would not have adversely affected plant hardware.

Quality Construction Procedures

In the past, these site level procedures were used to define Unit 1 and 2 construction inspection (and some installation) requirements for use in workplans, work packages, maintenance requests, etc. Additionally, QCPs provided detailed information to the quality control inspector. The source of these inspection requirements included various upper-tier engineering documents (G-Specs and ER Specs), ANSI/ASME requirements, etc. Over the last few years, QCPs have been cancelled and upper-tier source inspection requirements included or referenced in other site procedures as necessary. As of July 1991, all QCPs have been cancelled.

Prior to the subject violation, TVA had documented in CAQR WBP 880578 (now SCAR WBP 880578SCA) a problem involving failure to maintain QCPs current to changing upper-tier source documents. TVA's recent evaluation of the impact of delinquent QCPs found there is little likelihood of any impact on Unit 1 or Unit 2 plant hardware. The evaluation considered the effect of unimplemented upper-tier changes to QCPs which were active (i.e., not cancelled) as of August 1990. For conservatism, this review was performed regardless of whether another site construction procedure also containing inspection requirements was in force in parallel with the QCP. Based on the results of this assessment, it is unlikely that delinquencies in QCPs cancelled before August 1990 would have adversely affected plant equipment. However, TVA will perform an additional assessment to provide confidence that use of these QCPs prior to August 1990 did not create an adverse impact on plant hardware. This evaluation will be complete by October 31, 1991, and results documented under SCAR WBP 880578SCA. In the event any adverse impacts are identified such that reinspection or rework is required, TVA will notify NRC.

Document Control

Document Control and Records Management Instructions (DCRMIs) are administrative and would not impact plant hardware. These instructions provide methods and supplemental information for specific activities within the Document Control Department and are not designed for QA program implementation.

Training Department

Watts Bar Training Instructions (WBTIs) are administrative and would not impact plant hardware. Training commitments and activities that relate to or support Quality Assurance program requirements are required to be implemented in appropriate site/corporate administrative procedures and training documents.

COMMITMENT NUMBER 4:

TVA corporate administrative documents will be revised as necessary by August 15, 1991, to include the following elements: (1) prompt transmittal of parallel versions of approved documents to WBN Site Procedures, and (2) appropriate use of the terms "effective date," "implementation date," and "effective immediately."

RESULTS:

This commitment was satisfied prior to July 15, 1991.

ENCLOSURE 2

LIST OF COMMITMENTS

1. TVA will complete the workplan reviews described in the response related to items D-2868, D-2909, and D-4059. The required corrective action plan (if any) to disposition these three issues will be developed and approved by August 31, 1991 and tracked to completion under Significant Corrective Action Report (SCAR) WBP 900131SCA.
2. TVA will perform an additional assessment to provide confidence that use of Quality Construction Procedures (QCPs) which were cancelled before August 1990 did not create an adverse impact on plant hardware. This evaluation will be complete by October 31, 1991, and results documented under SCAR WBP 880578SCA. In the event any adverse impacts are identified such that reinspection or rework is required, TVA will notify NRC.