TENNESSEE VALLEY AUTHORITY
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SEP 15 1988

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

Gentlemen:

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

WATTS BAR NUCLEAR PLANT (WBN) - NRC INSPECTION REPORT NOS. 50-390/87-05 AND 50-391/87-05 - STATUS UPDATE ON VENDOR INFORMATION PROGRAM AND FINAL RESPONSE ON AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)-FINAL SAFETY ANALYSIS REPORT (FSAR) VERIFICATION

As committed to in TVA's letters to NRC dated January 15 and July 26, 1988, a status update on the vendor information program and ANSI-FSAR verification is being provided. Enclosure 1 describes the progress made in Watts Bar's vendor information program. It also replaces the ANSI-FSAR verification program commitments made in TVA's October 6, 1987 and January 15, 1988 responses to incorporate the ANSI commitments into working level procedures. Enclosure 2 contains a list of commitments made by TVA in the response.

A final submittal for the vendor information issues will be made by way of the Vendor Information Program Corrective Action Program (CAP) plan. This submittal also provides the final response for the ANSI-FSAR verification program portion of violation 390, 391/87-05-01.

If there are any questions, please telephone G. R. Ashley at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. Gridley, Manager
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Enclosures
cc: See page 2

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ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
STATUS UPDATE RESPONSE
FOR VIOLATION 87-05-01

Reference: NRC Inspection Report Nos. 50-390/87-05, 50-391/87-05, and NRC's August 10, 1987 letter

This is a status update on the vendor information program, and a final response on American National Standard Institute (ANSI)-Final Safety Analysis Report (FSAR) verification program.

Violation 390, 391/87-05-01

10 CFR 50, Appendix B, Criterion III, as implemented by the Quality Assurance (QA) Topical Report, Rev. 8, Paragraph 17.1.3, "Design Control," requires that control measures for the selection of suitable materials, parts, equipment, and processes are provided through the licensee's design guides, standards, and specifications, and industry standards and specifications.

Table 17D-2 of the QA Topical Report endorses American National Standards Institute (ANSI) Standard N45.2.1-1973, which requires that the class of cleanness required for any given application be specified in design drawings or specifications as referenced in section 3.1 of the standard.

Contrary to the above, applicable regulatory requirements and design bases were not correctly translated into specifications, drawings, procedures, and instructions as follows:

1. Critical installation requirements were not considered or included by specifications, drawings, procedures, or instructions.

   From NRC's August 10, 1987 letter:

   > The basis for the violation appears to be that inadequate design control existed when the drawing was issued which allowed design errors to exist on the drawing, subsequently resulting in hardware deficiencies. We request you address this concern regarding design controls relating to drawings and specifications.
   >
   > For Part 1, we requested you specifically address your plans to assure that vendor recommendations are considered in the design of other safety-related, vendor supplied equipment. Your response admits to needed revisions, but is mute concerning interim measures. You have significant contract engineering resources reporting at this time, however, measures to ensure consideration of vendor recommendations are not evident. Please provide additional information. Also, please describe your interim programs which will assure that any planned walkdown inspection and/or contract engineering efforts are adequately controlled regarding vendor requirements.

2. Classes of cleanness, as described in ANSI N45.2.1, were not prescribed in specification or drawings for equipment in an "in-place" storage status.

From NRC's August 10, 1987 letter:

> The on-site governing document specified in your Preventive Maintenance Program is WBN-QCP-1.52, "Preventive Maintenance." As discussed in Inspection Report 87-03 (Unresolved Item 87-03-02), procedure QCP 1.52 does not specify cleanness classes as required by American National Standard (ANSI) N45.2.1. Additionally, our inspectors reviewed numerous Preventive Maintenance Assignment Sheets for components (other than the reactor pressure vessel) and found cleanness classes were not specified. Therefore, except for G-39, which is a design output document, your staff could not produce an onsite specification or drawing that specifies the cleanness classes required by ANSI N45.2.1. We request you respond to this violation in the context discussed above.
>
> For Part 2 of the cover letter, we requested that you provide a description of your program for compliance with all the ANSI Standards committed to in the Final Safety Analysis Report or Quality Assurance Topical Report. We have reviewed your responses and note you are presently performing reviews, establishing rolldown matrices and will issue Conditions Adverse to Quality Reports (CAQRs) where noncompliance with specific ANSI Standards is identified. Therefore, we request you specifically identify and address areas where deficiencies are identified, discuss the effect on installed hardware, and provide the date when full compliance with ANSI Standards will be achieved.

This is a Severity Level IV Violation (Supplement II) and applies to units 1 and 2.

Inadequate Design Control/Vendor Information

1. Watts Bar Engineering Procedure (WBEP)-5.08, "ECN Modification Package," has been prepared which requires review of related vendor-supplied documents (VSD) and TVA-developed design input and output documents when a safety-related component uniquely identified in the quality assurance list (Q-List) is being modified. WBEP-5.03, "Design Change Notice," has also implemented the same type of review of related VSDs and TVA-developed design input and output documents. WBEP-5.03 requires that VSDs be reviewed for engineering requirements and the appropriate TVA documents be reviewed to ensure that vendor requirements have been referenced or incorporated.

2. Nuclear Engineering Procedure (NEP)-5.1, revision 1, (rather than NEP-5.2 as indicated in the previous status report) has been issued to more clearly address the control of vendor documentation references in design output documents. NEP-5.1 incorporates a cross-reference matrix tying design output documents to the vendor documentation which they reference and a checklist for evaluating the references.

3. Two Nuclear Power (NP) standards are being prepared which will address the control and updating of vendor information. These standards are currently identified as Office of Nuclear Power (ONP)-STD-5.9.14, "Vendor Information Control," and ONP-STD-9.1.05, "Vendor Manual Control." The document control function associated with vendor information will be proceduralized as ONP-STD-5.9.14 rather than ONP-STD-1.5.14 as indicated in the previous status report.

4. The vendor information program is being developed into its own corrective action program and is no longer an activity within the scope of the Design Baseline and Verification Program (DBVP) as was documented in the previous status report. A final submittal for the vendor information issue will be made by way of the Vendor Information Program Corrective Action Program (CAP) plan which is being prepared under the Watts Bar Program Plan. Separate correspondence provides the schedule for CAP plan submittals.

ANSI-FSAR

Additional confirmation of effective implementation of FSAR commitments to the ANSI standards is being provided through two different verification activities. The licensing verification activity of the DBVP and the vertical slice review complement each other in providing this additional confirmation.

1. Licensing verification is an activity within the scope of the DBVP CAP plan which is being prepared under the Watts Bar Program Plan. This verification activity includes unit 1 and common docketed WBN commitments associated with the FSAR, the Safety Evaluation Report (SER) and its supplements, responses to NRC, and the draft Watts Bar operating license. The highest level controlling document which implements a commitment is identified and reviewed to determine if the commitment has been correctly captured. The upper-tier verification results provide additional assurance that no programmatic failure exists in the implementation of commitments at WBN. If a commitment cannot be verified, and as inconsistencies are identified, an open item is created to track the commitment until it is either verified, revised, or captured in an implementing document. Open items are also created to document minor editorial corrections discovered in the verification process.

   A Licensing Document Commitment Matrix (LDCM) cross-referencing the commitment to its implementing document will be established. This matrix will be used as a maintenance tool to ensure consistency between licensing commitments and implementing documents when future changes to WBN implementing documents are made.

   The licensing verification activity has identified over 22,000 licensing commitments. Commitments to ANSI standards contained in the FSAR are a small fraction of these commitments and are verified using the same process as other types of commitments in the program. The licensing verification activity provides additional basis for confidence that ANSI commitments are implemented correctly. With over one-third of the original commitments verified, approximately nine percent of the commitments have required the creation of an open item. The FSAR discrepancies identified to date have been documentation discrepancies and not design deficiencies.

2. The vertical slice review will provide additional assurance that commitments are correctly implemented at WBN by verifying for select systems that upper-tier requirements have been incorporated into design, construction, and QA documents at WBN.

   A vertical slice review of two representative plant systems (one mechanical and one electrical) is being performed in an effort to identify any significant weaknesses in design, construction, and QA records for WBN. Portions of other systems (e.g., heating, ventilation, and air conditioning) and structures are also being reviewed by this effort. The vertical slice review will begin with licensing commitments associated with the selected systems and structures, and evaluate the conformance of plant design, construction, and QA records to these commitments. Any programmatic failure to incorporate ANSI commitments into the design, construction, or inspection of WBN would be identified as part of this review.

ENCLOSURE 2

LIST OF COMMITMENTS

Two Nuclear Power (NP) standards are being prepared which will address the control and updating of vendor information. These standards are identified as Office of Nuclear Power (ONP)-STD-5.9.14, "Vendor Information Control," and ONP-STD-9.1.05, "Vendor Manual Control." The document control function associated with vendor information will be proceduralized as ONP-STD-5.9.14 rather that ONP-STD-1.5.14 as indicated in the previous status report.

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