

TENNESSEE VALLEY AUTHORITY

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FEB 11 1987

WBRD-50-390/87-05
WBRD-50-391/87-05

10 CFR 50.55(e)

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Attention: Dr. J. Nelson Grace

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - "USE-AS-IS" AND "REPAIR"
DISPOSITIONING FOR CONSTRUCTION NONCONFORMING REPORTS - WBRD-50-390/87-05
AND WBRD-50-391/87-05 - INTERIM REPORT

The subject deficiency was initially reported to NRC-Region II Inspector Gordon Hunegs on January 12, 1987 in accordance with 10 CFR 50.55(e) as a potentially reportable item, NCR WBN WBP 8601. Enclosed is our interim report. A date for submittal of a final report cannot be determined at this time due to a lack of resources to complete the corrective action. We will provide NRC a schedule for the final report as resources are acquired and the schedule developed.

If there are any questions, please get in touch with R. D. Schulz at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



R. Gridley, Director
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Enclosure
cc: See page 2

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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
"USE-AS-IS" AND "REPAIR" DISPOSITIONS FOR CONSTRUCTION
NONCONFORMANCE REPORTS (NCRs)
SCR WBN WBP 8601 R0
10 CFR 50.55(e)
INTERIM REPORT

Description of Deficiency

Division of Nuclear Engineering (DNE) Engineering Assurance (EA) conducted an audit of Watts Bar Engineering Project (WBEP) activities related to the handling of construction nonconformance reports (NCRs). The audit evaluated the WBEP activities related to the disposition, documentation and control of construction NCRs with special emphasis placed on NCRs with "use-as-is" or "repair" dispositions to ensure that these dispositions were adequately justified and design safety margins were not compromised.

The audit identified one deficiency (No. 86-27-01) that contained four concerns:

1. "Use-as-is" and "repair" dispositioned NCRs are not tracked against the affected document, so in most cases for NCRs designated as not requiring a drawing change, there is no retrievable, consolidated record of the accepted variations from the drawing or original design and the cumulative effect of the design on the margin of safety is indeterminate. Also, very little evidence could be found to indicate that these NCRs have received the same level of independent design verification and interdisciplinary reviews as the original design.
2. "Use-as-is" dispositioned NCRs that come under the ASME Code that are designated as not requiring a drawing change also do not meet ASME Code requirements, since the NCR cannot be readily linked to the drawing to indicate as-constructed configuration. NCRs dispositioned as requiring a drawing change did not exhibit these problems since the drawing, NCR, and ECN are all cross-referenced.
3. Many "use-as-is" dispositioned NCRs either do not have any justification or lack adequate justification detail, such as references to supporting documents or analysis, making it difficult or impossible to trace the justification without recourse to someone familiar with the condition described.
4. There does not appear to be any project procedural guidance for the handling of NCRs. It is recognized that division guidance is also lacking, and this has been referred to the Engineering Assurance Procedures Group for resolution. The project, however, must have some interim and detailed implementing guidance to ensure NCRs are adequately and consistently handled.

This condition applies to WBN CAQs initiated by the Division of Nuclear Construction (DNC), Site Director's Office (SDO), and vendors that were sent to DNE and dispositioned by DNE as "use-as-is" or "repair." The DNE-initiated CAQs that were dispositioned "use-as-is" are potentially deficient because there was inadequate procedural guidelines for documentation requirements of "use-as-is" dispositions for DNE-initiated CAQs. Also, any DNC and SDO initiated CAQs that were given a final disposition of "use-as-is" or "repair" and were not sent to DNE for review and approval are potentially deficient.

The cause of this deficiency is attributable to the fact that requirements for documenting DNE's final disposition of "use-as-is" or "repair" for DNC CAQs were not specified in a project procedure or in a division level procedure. The level of documentation for the technical evaluation, review, approval, and the configuration resulting from CAQs approved by DNE as "use-as-is" or "repair" did not meet all requirements of ANSI N45.2-1971 because personnel performing the activities were not aware of the ANSI N45.2-1971 requirements concerning the disposition of "use-as-is" or "repair" NCRs.

Safety Implications

The margin of safety at WBN may potentially have been compromised because there is inadequate documentation of the as-built condition resulting from "use-as-is" and "repair" dispositions. This condition could have caused the design margin of safety to be adversely affected because the cumulative effect of past dispositions was not documented and available for consideration in reviewing later design changes. Until such time as the cumulative effect of past dispositions can be evaluated, the affect of this condition on plant safety is indeterminate. This condition, therefore, could have jeopardized the safe operation of the plant had it remained uncorrected.

Interim Progress

TVA is currently developing a corrective action plan for which the following actions are being considered.

For all CAQs on WBN that had a final DNE, DNC, or SDO disposition of "use-as-is" or "repair" perform a review to accomplish the following:

- A. Identify the WBN CAQs that had a final disposition of either "use-as-is" or "repair."
- B. For the CAQs identified in step A, identify those that had no design drawings or documents issued as a result of the final disposition being "use-as-is" or "repair."
- C. For the CAQs identified in step B, identify the design documents that contain the design requirements that were not met as described by the CAQ.

- D. For each design document identified in step C, perform a technical review of the latest revision of the document and consider what effect the condition described by the CAQ has on the document. Either prepare or revise a calculation to technically justify the current revision of the document and indicate what cumulative effect, if any, that the CAQ or CAQs have on the document as to technical adequacy, design margin, conformance to criteria, and FSAR commitments. Revise the document to either reflect the as-constructed configuration represented by the CAQ or to post the CAQ number on the drawing as a reference.
- E. Issue a matrix drawing that cross references the CAQs identified in step B and the affected documents that were revised to incorporate the CAQs.
- F. Issue a memorandum from the WBEP Project Engineer to the DNC-WBN Project Manager and WBN Site Director with the matrix drawing attached with instructions to file the memorandum and matrix drawing with each CAQ listed on the matrix drawing.

In order to prevent recurrence a WBN Engineering Project Procedure (WBEP-EP43.23) has been issued that establishes the requirements for handling CAQs that are either initiated within DNE or sent to WBEP for disposition by organizations outside DNE. Training in this procedure has been given to WBEP managers.

All corrective actions to resolve this SCR will be completed before unit 1 fuel load. A schedule for completion of the corrective action is not known because the resources required to accomplish this work are not available. A final report will be submitted upon completion of all corrective action definition and will identify any conditions that could have jeopardized the safe operation of the plant. A schedule for this submittal will be determined as resources are acquired, at which time NRC will be informed.

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