

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

NOV 25 1987

WBRD-50-390/87-21
WBRD-50-391/87-25

10 CFR 50.55(e)

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

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 - LACK OF COMPLETE CONTROLLING
DESIGN INPUT REQUIREMENTS - WBRD-50-390/87-21 AND WBRD-50-391/87-25 -
INTERIM REPORT

The subject deficiency was initially reported to NRC Region II Inspector
Art Johnson on October 30, 1987, in accordance with 10 CFR 50.55(e) as
CAQR WBP 870443. Enclosed is our interim report. We expect to submit our
final report on or about May 30, 1989.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. Gridley
R. Gridley, Director
Nuclear Licensing and
Regulatory Affairs

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission

NOV 25 1987

cc (Enclosure):

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
LACK OF COMPLETE CONTROLLING DESIGN INPUT REQUIREMENTS
WBRD-50-390/87-21 AND WBRD-50-391/87-25
CAQR WBP 870443
10 CFR 50.55(e)

INTERIM REPORT

Description of Deficiency

Nuclear Engineering Procedure (NEP) 3.2 requires that design input for safety-related structures, systems, and components be identified, documented, and preserved. Additionally, it requires that changes to design input be evaluated and, where appropriate, be reflected in revisions to other affected design input documents. As stated in the program description submitted to NRC on August 19, 1986, the Watts Bar Design Baseline and Verification Program (DBVP) includes development of a single source design basis document (DBD). This DBD will be developed by updating existing design criteria and system descriptions, and by preparing new design criteria or system descriptions as needed to satisfy the requirements of NEP 3.2. The DBD is to contain:

1. Design input level commitments made in licensing documents.
2. Design input requirements contained in various other internal design documents.

While in the process of developing the DBD, TVA determined that appropriate design input was lacking in several existing design input documents. This indicated that all design inputs may not be well documented. Examples of missing information include requirements for instrument accuracies (reported to NRC as WBRD-50-390/87-16 and WBRD-50-391/87-17), requirements for valve stroke times, and calculations supporting values in existing criteria.

Safety Implications

If this condition had remained uncorrected, portions of the plant design may not have been evaluated and performed in accordance with proper design requirements. The potential for the design output documents and the resulting constructed features to not reflect the design basis of the plant could have jeopardized the safe operation of the plant.

Corrective Actions

As noted above, the DBVP includes development of a new Watts Bar DBD and the associated procedures to control this document. To accomplish this task, the licensing commitments made by TVA to regulatory agencies and internal documents such as correspondence, specifications, job books, notes, manuals, and other miscellaneous records are to be compiled and sorted by engineering discipline. These documents are then to be reviewed by senior TVA engineers in each discipline and the design basis information in each document identified.

The project lead discipline engineers are to identify the essential set of new and existing design criteria and system description documents necessary to effectively contain the WBN design basis. Existing design criteria and system descriptions are then to be revised, and new ones drafted, to incorporate the information identified by the senior engineers. Draft design criteria and system description documents are to be reviewed by the affected engineering disciplines. Once all draft design criteria and system description documents have been approved, the set will be issued as the WBN DBD and maintained for the life of the plant.

Any information added, deleted, or changed from issued documents and any recommendation or unresolved technical issues, such as missing calculations, new requirements, etc., are to be identified as open items. Open items are to be assigned to the responsible organization and tracked to resolution. Identification of design output which is determined to be inconsistent with the plant design basis requirements will result in the initiation of condition adverse to quality reports (CAQRs) as appropriate. Open items which represent unacceptable and potentially unacceptable safety system design will be resolved before unit 1 fuel load.

A new procedure is to be prepared which will provide for the maintenance of the WBN DBD to ensure that this baseline set of input requirements is maintained consistent with plant design and regulatory requirements.

The entire WBN DBD and the associated maintenance procedure will be issued before unit 1 fuel load.

TVA will provide a final report on this deficiency, to address the extent of the problems with safety-significant open items, on or about May 30, 1989.