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TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

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WBRD-50-390/86-55

U.S. Nuclear Regulatory Commission
Region II
Attention: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT (WBN) - UNIT 1 - QUESTIONABLE LOCATIONS OF INSTALLED UNIT 1 ENGINEERED SUPPORTS WBRD-50-390/86-55 - INTERIM REPORT

The subject deficiency was initially reported to NRC-Region II Inspector Art Johnson on June 6, 1986 in accordance with 10 CFR 50.55(e) as SCR WBN CEB 8650. Enclosed is our interim report. We expect to submit our final report on or about November 30, 1986.

If there are any questions, please get in touch J. A. McDonald at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. L. Gridley, Director
Nuclear Safety and Licensing

Enclosure
cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 1
QUESTIONABLE LOCATIONS OF INSTALLED UNIT 1 ENGINEERED SUPPORTS
WBRD-50-390/86-55
SCR WBN CEB 8650
10 CFR 50.55(e)
INTERIM REPORT

Description of Deficiency

For Watts Bar Nuclear Plant (WBN), engineered support drawings are routed via interface review through the Watts Bar Engineering Project (WBEP) civil structural sections for approval of attachments to building and platform structural steel before the support drawings or revisions thereto are issued. The interface review process only approves the locations specified on the support drawings and does not consider the relocation tolerances as outlined in General Construction Specification G-43. To assure the consideration of any tolerances applied in the relocation of supports, the Division of Nuclear Construction (NU CON) requests approval of engineered supports which they relocate, through field change requests (FCRs) which show the actual as-built locations of the supports. This process is achieved through section 6.1.1.2 of Quality Control Instuction (QCI) 1.13, "Preparation and Documentation of Field Change Requests." However, a similar review process has not been implemented for supports installed by the WBN Modifications Branch. Consequently, unit 1 supports may be installed or relocated by the Modifications Branch at locations which have not been analyzed by the Division of Nuclear Engineering (DNE).

While the cause of this condition has not been determined, a possible contributing factor involves a similar problem with typical supports identified by NCR 3659 R1 (WBRD-50-390/81-99, 391/81-93). The DNE-approved action required to prevent recurrence for that NCR was to revise affected drawing notes so that attachments to cable tray supports, building steel, and miscellaneous steel could only be made by approved variances or FCRs. This note was added to the typical support drawings, but a similar note was not added to the engineered support drawings.

Safety Implications

This condition, if left uncorrected, could result in cases where the allowable stresses of structural steel could be exceeded. Under design basis accident conditions, a failure of this structural steel could cause subsequent damage to piping system supports attached to the steel and/or to safety-related equipment located nearby. As such, this condition could adversely affect the safe operation of the plant.

Interim Progress

TVA is determining necessary procedural and/or drawing revisions to ensure that the as-built locations of engineered supports are documented and used in the analysis of structural and miscellaneous steel.

Also, TVA will identify and list engineered supports attached to building or platform structural steel which have been installed or modified since system transfer from MU CON. From this list, engineered supports which do not have FCRs documenting the as-built locations will be identified. As-built locations of these supports will then be evaluated to determine the structural integrity of the building or platform structural steel.

The root cause and action to prevent recurrence are being determined and will be provided in our final report on this item which will be submitted to the NRC on or about November 30, 1986.