

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

December 22, 1982

WBRD-50-390/82-84

WBRD-50-391/82-80

U.S. Nuclear Regulatory Commission

Region II

Attn: Mr. James P. O'Reilly, Regional Administrator

101 Marietta Street, Suite 3100

Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - LACK OF QUALIFICATION FOR EMBEDMENT PLATES - WBRD-50-390/82-84, WBRD-50-391/82-80 - FINAL REPORT

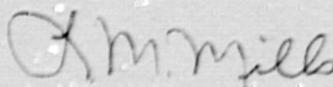
On December 15, 1981 NRC Region II Inspector R. Butcher was notified of a reportable deficiency involving TVA review and handling of Engineering Change Notices (ECNs). Interim reports on this deficiency (Audit M81-13) were provided on January 19 and March 31, 1982. On May 19, 1982 NRC Region II Inspector R. V. Crlenjak was notified that nonconformance report (NCR) WBN CEB 8217 would be included with Audit M81-13. Another report concerning these combined deficiencies was provided on August 5, 1982.

On August 16, 1982 NRC Region II Inspector F. Long was notified that NCR CEB 8217 would be handled separately from Audit M81-13. Interim reports specifically for NCR CEB 8217 were submitted on September 14 and November 12, 1982. Enclosed is our final report.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager  
Nuclear Licensing

Enclosure

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

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## ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
LACK OF QUALIFICATION FOR EMBEDMENT PLATES  
NCR WBN CEB 8217  
WBRD-50-390/82-84, WBRD-50-391/82-80  
10 CFR 50.55(e)  
FINAL REPORT

### Description of Deficiency

In 1978, EDS Nuclear, Incorporated, Norcross, Georgia, notified TVA by letter of the completion of their design verification effort for TVA support embedment plates having EDS-designed pipe support loads. The letter identified several supports for the Reactor Coolant System and Component Coolant System piping at Watts Bar (WBN) which exceeded the allowable loads provided to EDS by TVA. As TVA had already approved the EDS drawings and had issued them to its construction forces, a nonconformance report (NCR) was required to identify this deficiency. However, an NCR was not written until after EDS had supplied TVA, in 1981, with the actual support revisions. This was due to a failure by TVA design personnel to either understand or comply with the directions of TVA's Division of Engineering Design (EN DES) Engineering Procedure (EP) 1.26, "Nonconformance Reporting and Handling by EN DES," which was in effect at that time.

The second aspect of this NCR, the issuance of deficient drawings to the field, was caused by the approval of vendor drawings by EN DES personnel before the receipt of the vendor's analysis package.

### Safety Implications

Overloading of embedment plates used in the Reactor Coolant and Component Coolant System piping support scheme could allow these plates to fail and cause a subsequent failure of the system piping. This could adversely affect the safe operation of the plant.

### Corrective Action

TVA has completed the design changes for modification of the supports in question and has qualified all of the previously overloaded embedments under Engineering Change Notice (ECN) 2958. This ECN has been issued to the construction site and the modifications completed for unit 1. Scheduled completion for unit 2 work is October 30, 1984.

On September 10, 1982, a meeting was held among the WBN Piping Analysis Support Group personnel and the requirements of EP 1.26, particularly the criteria for timely identification and filing of nonconformances, were pointed out. In addition, civil design personnel, in general, are periodically being instructed in the requirements of this EP to ensure that this problem will not recur.

Concerning the issuance of drawings before receipt of the vendor's analysis package, TVA is committed to the requirements of EP 3.03, Revision 5, "Design Calculations" and per the requirements of this EP will not issue vendor drawings to construction forces before receipt of vendor analysis.