

**TENNESSEE VALLEY AUTHORITY**

CHATTANOOGA, TENNESSEE 37401

5th 157B Lookout Place

10 11 27 P 3: 11  
January 13, 1986

WBRD-50-390/86-02

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 UNIT 1 - LACK OF SUPPORTING DOCUMENTATION FOR 10% OF  
PIPE SUPPORT DESIGNS - WBRD-50-390/86-02 - FINAL REPORT

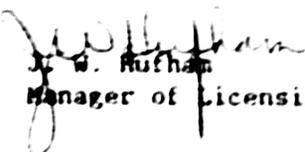
The subject deficiency was initially reported to NRC-OIE Inspector  
Al Ignatonis on November 26, 1985 in accordance with 10 CFR 50.55(e) as NCR  
WBN CEB 8531. Enclosed is our final report.

Late submittal of this report was discussed with Mr. Ignatonis on January 6,  
1986.

If there are any questions, please get in touch with R. H. Shell at  
FIS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
J. W. Ruffin  
Manager of 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 LACK OF SUPPORTING DOCUMENTATION FOR 10% OF PIPE SUPPORT DESIGNS

WBRD-50-390/86-02

SCR WBN CEB 8531

10 CFR 50.55(e)

FINAL REPORT

#### Description of Deficiency

In pursuing corrective action to resolve problem identification report (PIR) WBN CEB 8531, which identified miscoding of calculation packages into the Records and Information Management System (RIMS), TVA was unable to locate approximately 10 percent of the calculations required to document the design of safety-related pipe supports for Watts Bar Nuclear Plant (WBN) unit 1. In addition, approximately 20 percent of the existing calculation packages only address a specific revision or aspects of the design and do not fully justify the total support design. Previous nonconformance reports (NCRs) WBN SWP 8303 and WBN CEB 8418 identified as a deficiency in the lack of support calculations for many of the supports designed by EDS Nuclear, Incorporated. TVA has committed as part of the corrective action in resolving issues related to IE Bulletin 79-02, to regenerate 100 percent of these missing support calculations with similar actions for the two previous NCRs.

The root cause of this deficiency is attributed to the lack of understanding and control by management of the requirements to formally document and maintain all calculations required to justify the design and technical adequacy of the supports.

#### Safety Implications

At present, there is no indication that any of the safety-related pipe supports with missing or incomplete calculations are deficient or would fail in any design basis event. Approved and issued design drawings are available for all engineered supports affected by this condition. However, the technical adequacy of the supports cannot be verified without the design calculations. Therefore, this presents a potential condition which could adversely affect the safe operation of the plant.

Corrective Action

TVA will review all existing pipe support calculations on unit 1 for completeness and assure that all are properly coded and stored in RIMS. TVA will also prepare, issue, and document calculations for all missing and incomplete calculation packages to provide assurance that the issued design calculations meet the applicable design criteria. This effort will be completed in conjunction with previous TVA commitments associated with IE Bulletin 79-02 and the missing EDS calculations which are to be complete by the first refueling outage.

In order to prevent recurrence, Office of Engineering Procedure (OEP) 07, "Calculations," and OEP-16, "Design Records Control," which have been issued to supersede the old Engineering Design Engineering Procedures, clearly define calculation documentation requirements. All support designers and managers have been trained on these procedures.