

**TENNESSEE VALLEY AUTHORITY**

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

March 2, 1982

WBRO 50-390/81-93  
WBRO 50-391/81-87

**U.S. Nuclear Regulatory Commission  
Region II**

ATTN: 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 - THERMAL RANGE INCORRECTLY  
ANALYZED - WBRO-50-390/81-93, WBRO-50-391/81-87 - SECOND INTERIM REPORT**

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on October 22, 1981 in accordance with 10 CFR 50.55(e) as NCR WBN CEB 8116. Our first interim report was submitted on November 24, 1981. Enclosed is our second interim report. We expect to submit our next report by April 19, 1982.

If you have any questions, please get in touch with R. H. Shell at FTS 850-2688.

Very truly yours,

**TENNESSEE VALLEY AUTHORITY**

L. M. Mills, Manager  
Nuclear Regulation and Safety

Enclosure

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

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## ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
THERMAL RANGE INCORRECTLY ANALYZED  
WBRD-50-390/81-93, WBRD-50-391/81-87  
10 CFR 50.55(e)  
SECOND INTERIM REPORT

### Description of Deficiency

The Watts Bar FSAR, section 10.4.9.2, defines a thermal range for the Auxiliary Feedwater System of 40° to 120°F. The ASME Code, section NC-3651, for classes 2 and 3 piping systems, requires that the full range of moments be evaluated. A thermal range of 70° to 120°F was used to evaluate the moments for suction and discharge piping for the auxiliary feedwater pumps by the piping stress analyst. This condition may result in unconservative stress levels. Piping analysis problems affected by the above omission are units 1 and 2, 0600-200-02-05, -06, -07, -08, 0600-200-05-01, -02; unit 1, N3-3-10A, -12A and unit 2, N3-3-1A, -2A, -9A, -17A, -19A.

The analysis errors mentioned above were discovered during an analysis review.

### Interim Progress

TVA is currently reanalyzing the above piping problems with the correct thermal range model. Support changes will be provided as required. TVA is still investigating actions to prevent recurrence of this type deficiency. The results of the analysis and investigation will be provided in our next report.