

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

USNRC REGION II  
ATLANTA, GEORGIA

August 2, 1983 83 AUG 11 A10:38

WBRD-50-390/81-99

WBRD-50-391/81-93

U.S. Nuclear Regulatory Commission

Region II

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

101 Marietta Street, NW, Suite 2900

Atlanta, Georgia 30303

Dear Mr. O'Reilly:

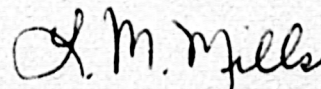
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - LOADING CRITERIA FOR STRUCTURAL  
STEEL AND SUPPORTS - WBRD-50-390/81-99, WBRD-50-391/81-93 - SUPPLEMENTAL  
FINAL REPORT FOR UNIT 1 AND FINAL REPORT FOR UNIT 2

The subject deficiency was initially reported to NRC-OIE Inspector  
R. V. Crlenjak on November 17, 1981 in accordance with 10 CFR 50.55(e) as  
NCR 3659R R1. Interim reports were submitted on December 18, 1981;  
March 3, June 7, and September 30, 1982; and March 8, 1983. Our final and  
sixth interim report for unit 1 and unit 2, respectively, was submitted on  
June 13, 1983. Enclosed is our supplemental final report for unit 1 and  
final report for unit 2.

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

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 UNITS 1 AND 2 LOADING CRITERIA FOR STRUCTURAL STEEL AND SUPPORTS NCR 3659R R1

WBRD-50-390/81-99, WBRD-50-391/81-93

10 CFR 50.55(e)

### SUPPLEMENTAL FINAL REPORT FOR UNIT 1 AND FINAL REPORT FOR UNIT 2

#### Description of Deficiency

Several notes in general notes drawing series 47A050 and 47A058 permit TVA's Division of Construction (CONST) to make attachments or alterations to building and miscellaneous steel and cable tray supports (baseplates are addressed in NCR WBN CEB 8203 (WBRD-50-390/82-39, WBRD-50-391/82-3f)) for supports of all types. These notes specify loading criteria that must be complied with. The loading criteria did not clearly define the consideration of cumulative loads for construction application, and it was also misinterpreted by CONST.

The apparent cause was inadequate review of design notes for clarity by TVA's Division of Engineering Design (EN DES) and inadequate review by CONST to assure uniform interpretation and application of the notes.

#### Safety Implications

This condition, had it remained uncorrected, could have resulted in some cases of exceeding the allowable stresses of the structural steel, thus adversely affecting the safe operation of the plant.

#### Corrective Action

In order to prevent recurrence, EN DES has revised and deleted some general notes to clarify the notes for this NCR. Also, ongoing training programs in EN DES engineering procedures (EPs) will eliminate the possibility of misinterpretation of drawing notes.

A field review has been initiated by EN DES and CONST personnel to evaluate attachments to structural steel, miscellaneous steel, etc. EN DES identified all significant attachments to structural steel and CONST mapped out all these significant attachments to structural steel platforms and forwarded them to EN DES for evaluation. EN DES is evaluating the structural steel platforms and is maintaining a permanent key drawing record to evaluate future attachments identified to EN DES by the field change request or variance procedure. CONST has completed the mapping for both unit 1 and unit 2.



In the previous final report for unit 1, TVA indicated that EN DES had completed the evaluation of unit 1, and all unit 1 drawings have been issued. However, the EN DES evaluation of the last two attachments revealed that the attachments should have been properly identified as common attachments for unit 1 and 2. The evaluation of these two attachments will be complete by August 12, 1983, and thereby complete the EN DES evaluation for both units.

EN DES will revise all typical drawings for unit 2 attachments shown as attaching to structural steel with a note that reads, "All attachments to structural steel must be submitted to EN DES civil group for evaluation." Drawing revisions will be made under engineering change notice (ECN) 3255. This item will be accomplished by August 12, 1983.

Unit 1 CONST completion is scheduled for October 15, 1983 and unit 2 CONST completion will be accomplished by December 28, 1984.