

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
5N 157B Lookout Place

February 7, 1986

WBRD-50-390/86-19
WBRD-50-391/86-15

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

65 FEB 12 11:07

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - INVALID COLD FORMING PROCEDURES USED
TO BELD PROCESS PIPE - WBRD-50-390/86-19, WBRD-50-391/86-15 - INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Al Ignatonis on January 6, 1986 in accordance with 10 CFR 50.55(e) as NCRs WBN
6518 and 6524. Enclosed is our interim report. We expect to submit our next
report on or about April 17, 1986.

Delay in submittal of this report was discussed with Bob Carroll on
February 5, 1986.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Homer
R. L. Gridley
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
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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
INVALID COLD FORMING PROCEDURES USED TO BEND PROCESS PIPE
WBRD-50-390/86-19, WBRD-50-391/86-15
NCRs WBN 6518 AND WBN 6524
10 CFR 50.55(e)
INTERIM REPORT

Description of Deficiency

Several cold forming (CF) procedures (13 total) used in performing bends on noninstrument safety-related piping for various systems at Watts Bar Nuclear Plant (WBN) have now been determined to be invalid. The affected CF procedures are invalid due to an insufficient number of qualification bend samples being performed, sample bend wall thickness discrepancies, or an unknown bending machine (i.e., manufacturer and model number not documented). TVA General Construction Specification G-29M, Process Specification 4.M.2.1 defines the requirements for CF procedure qualification. These deficiencies were identified as a result of a generic review for a similar deficiency on instrument line bends identified by nonconformance report (NCR) 6276.

Safety Implications

Without acceptable qualification of affected CF procedures, there is a potential for pipe bends, which were performed using the subject procedures, to have wall thicknesses below minimum design requirements. Additionally, excessive pipe ovality could result in the bend area. Excessive pipe ovality or pipe wall thinning could result in unanticipated loading conditions and/or a loss of pressure boundary integrity of an affected system under design basis conditions. While no failures of this type are documented, the potential for this condition to adversely affect the integrity of a safety-related system must be considered. Systems which could potentially be affected by the subject deficiency include the reactor coolant, essential raw cooling water, and chemical and volume control systems at WBN. As such, TVA considers that the subject deficiency potentially could adversely affect the safety of operations of the plant.

Interim Progress

All pipe bending operations at WBN associated with the affected CF procedures have been suspended. All future noninstrument pipe bending at WBN will be performed per procedures which are being revised or issued to meet the acceptance criteria of G 29M, Process Specification 4.M.2.1.

TVA is in the process of performing a sample program to verify the acceptability of affected pipe bends.

TVA will provide a final report on this item to NRC by April 17, 1986.