

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

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Mr. James P. O'Reilly, Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Region II - Suite 3100  
101 Marietta Street  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - FULL PENETRATION WELDS FOR PIPE  
SUPPORTS - NCR WBN SWP 8007 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector  
M. Thomas on October 10, 1980, in accordance with 10 CFR 50.55(e).  
Enclosed is our final report.

If you have any questions, please get in touch with D. L. Lambert at  
FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager  
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, 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  
FULL PENETRATION WELDS FOR PIPE SUPPORTS  
NCR WBN SWP 8007  
10 CFR 50.55(e)  
FINAL REPORT

Description of Deficiency

During a design review of an approved field change request for Watts Bar Nuclear Plant units 1 and 2, it was discovered that drawings for certain pipe supports in the RHR system were issued for Construction specifying welds incorrectly. The drawings specified fillet welds for welding rectangular support lug attachments to the piping pressure boundary instead of specifying the required full-penetration welds. As a result, the fillet welds could have proved to be inadequate in not carrying the required seismic design loads.

Safety Implications

Failure of these fillet welds on the rectangular support lug attachments could have resulted in pipe failure and reduced flow to the RHR system, which would invalidate the plant safety analysis. Failure of this safety system to operate could have adversely affected the safety of operations of the plant.

Corrective Action

The affected supports have been redesigned using attachments not welded to the piping pressure boundary. Drawings have been issued to Construction with the design changes. Modifications will be completed by August 1, 1981, for unit 1 and January 5, 1982, for unit 2.

This particular situation was resolved without the use of attachments welded to the piping pressure boundary; however, such attachments are acceptable provided they are constructed with full-penetration welds. All engineers responsible for approving field change requests have been advised of the full-penetration welding requirements.