

08/09/78

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DOCTYPE: LETTER NOTARIZED: NO

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SUBJECT:
FORWARDING COPY OF TOPICAL REPT CEB-76--25, REVISION 1, ENTITLED: "PIPE
RUPTURE ANALYSIS FOR GUARD PIPE, BELLEFONTE NUC PLANT UNITS 1 AND 2."

Bellefonte #142

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TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

830 Power Building

REGULATORY DOCKET FILE COPY

JUL 21 1978

Director of Nuclear Reactor Regulation
Attention: Mr. Olan D. Parr, Chief
Branch No. 3
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Parr:

In the Matter of the Application of) Docket Nos. 50-438
Tennessee Valley Authority) 50-439

Enclosed are 20 copies of Topical Report CEB-76-25, Revision 1, "Pipe Rupture Analysis for Guard Pipe, Bellefonte Nuclear Plant Units 1 and 2." Topical Report CEB-76-25 has been revised to incorporate additional information requested by the NRC in order to allow a meaningful evaluation of the TVA design.

CEB-76-25, Revision 1, addresses part 2 of the enclosure to your letter to Godwin Williams, Jr., dated June 14, 1977. This portion of the enclosure specifically notes that the analysis approach used to demonstrate containment integrity under postulated full break conditions does not constitute sufficient technical basis for waiving the required inservice inspection of welds enclosed by guard pipes. This is primarily because there is no justification provided for the jet impingement force component of the load input.

In response to this concern of the NRC, TVA has evaluated the Naval Surface Weapons Center (NSWC) report entitled, "Pressure Loads Produced by Steam Pipe Rupture," by D. L. Lehto and J. F. Proctor. This report was informally handed to TVA representatives during meetings with persons performing the review within NRC. It is our understanding that this report is considered by the NRC review team to yield upper-bound loading for the jet impingement loads that interact with guard pipes. TVA concurs with this position.

TVA has revised this report to justify the loading which was used in the analysis of the guard pipe. This justification is incorporated in Appendix A to CEB-76-25, Revision 1 for your review. It was developed by Dr. William Cooper and his staff from Teledyne Engineering Services. Basically, the evaluation demonstrates that the loading utilized in the TVA analysis envelops that which the NSWC report would have required. Therefore, it is TVA's position that containment integrity will not be jeopardized considering a postulated break in the process pipe enclosed by the guard pipe.

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*NONE
1/5/20
Re: Rep
etc*

JUL 21 1978

Mr. Olan D. Parr

In conclusion, TVA believes the analyses demonstrate that the loading has been justified and that containment integrity is protected considering the postulated rupture of the process pipe. Based upon this conclusion, TVA believes it has met the concerns of part 2 of the enclosure to the referenced letter and, therefore, the requested exemption from inservice inspection of welds in the main steam and feedwater process pipes enclosed by guard pipes should be granted.

TVA has already procured the forgings and guard pipes described in the topical report. Because of the impact changes in this penetration design would have on plant construction schedules and ultimate fuel loading, we would appreciate an expeditious review of this topical report. We will be glad to answer any questions you may have related to this topical report.

Very truly yours,

J. E. Gilleland
Assistant Manager of Power

Enclosure (20)