

PART 21 IDENTIFICATION NO. 81-428-000 COMPANY NAME TVS

DATE OF LETTER 5/13/81 DOCKET NO. 50-438

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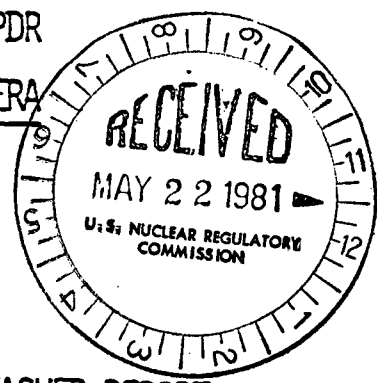
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ACTION:

PRELIMINARY EVALUATION OF THE ATTACHED REPORT INDICATES LEAD RESPONSIBILITY FOR FOLLOWUP AS SHOWN BELOW:

IE

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OTHER

EES 8105280053

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

May 13, 1981

81-428-000

BLRD-50-438/81-06

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:

BELLEFONTE NUCLEAR PLANT UNIT 1 - FAULTY ANALYSIS BY PMB SYSTEMS
ENGINEERING - BLRD-50-438/81-06 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector W. Swan on December 24, 1980, in accordance with 10 CFR 50.55(e) as NCR BLN CEB 8010. This was followed by our first interim report dated January 22, 1981. Enclosed is our final report. We consider 10 CFR Part 21 to be applicable to this deficiency.

If you have any questions concerning this matter, 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, Jr., Director (Enclosure) ✓
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNIT 1
FAULTY ANALYSIS BY PMB SYSTEMS ENGINEERING
BLRD-50-438/81-06
10 CFR 50.55(e)
FINAL REPORT

Description of Condition

In performing the final piping analysis for piping in the Diesel Generator Building (problems N4-100-C and N4-100-D), the personal service contractor, PMB Systems Engineering, Incorporated (PMB) did not verify the response spectra supplied by TVA. The response spectra used was generated by TVA for the preliminary analysis of the piping. As it appears in the PMB final analysis report dated July 14, 1978, the response spectra has been applied in the wrong coordinate directions. The cause of this condition was inadequate verification of data used in final piping analysis.

Safety Implications

Since the magnitude of accelerations of response spectra in each coordinate direction is significantly different, supports for this piping could have failed when subjected to the operating basis or safe shutdown earthquakes.

Corrective Action

Problems N4-100-C and N4-100-D have been reanalyzed using the proper response spectra applied in the correct directions. Of 29 supports, 6 exhibited support load increases of less than seven percent. Support designs will be field modified where required in accordance with engineering procedure BLP EP 44.77, "Review of Revised Piping Analysis for Category I Structures and Resultant Documentation and Checkout of Support Modifications." TVA expects to complete these field modifications by February 1, 1983.

Documentation and procedures for checking have been established which ensure proper response spectra is used. PMB Systems Engineering, as well as other personal service contractors, has been instructed to verify all data used in final piping analyses.