

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

September 17, 1981

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:

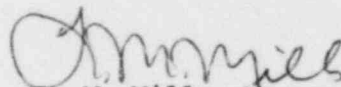
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - MAIN STEAM LINE ANALYSIS TRIPE INPUT
ERROR - NCR BLN CEB 8007 - THIRD INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
R. W. Wright on October 2, 1980 in accordance with 10 CFR 50.55(e). This was
followed by our interim reports dated October 31, 1980 and July 20, 1981.
Enclosed is our third interim report. We expect to submit our next report by
December 8, 1981.

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

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
MAIN STEAM LINE ANALYSIS TPIPE INPUT ERROR
NCR BLN CEB 8007
10 CFR 50.55(e)
THIRD INTERIM REPORT

Description of Deficiency

The calculated effects of a steam hammer occurrence in the Bellefonte Nuclear Plant main steam lines have been questioned because of an input error in the TPIPE computer program used in the analysis.

The input error occurred when several forcing functions with different arrival times were applied at individual node names. This procedure is incorrect (though the application of multiple forcing functions at a single node name is permissible provided all have the same arrival times).

In order to facilitate the analysis of the main steam lines, the computer is programed to analyze only a portion of the total piping involved with each problem submittal. The problems affected by the subject input error are N4-LSM-A, B, C, K, and L. These represent main steam line piping in valve room A, piping transversing into the Turbine Building, valve room B, and main steam line piping which penetrates primary containment, respectively.

Interim Progress

The affected problems listed above have all been rerun on TPIPE with the correct input data for TPIPE. Problems N4-LSM-B, N4-LSM-C, N4-LSM-K, and N4-LSM-L have been issued with the correct time history analysis included. TVA has yet to resolve computer problem N4-LSM-A because of difficulties in modeling valve accelerations. The program is now being checked and reviewed. It is scheduled for completion in late October.