

Central files

INDIANA & MICHIGAN POWER COMPANY

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NEW YORK, N. Y. 10004

May 4, 1979
AEP:NRC:00186A

Donald C. Cook Nuclear Plant Units 1 & 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
IE Bulletin No. 79-07
Seismic Stress Analysis of Safety-Related Piping

Mr. J. G. Keppler, Regional Director
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Ref: (1) Letter No. AEP:NRC:00186, dated April 24, 1979

Dear Mr. Keppler:

This letter completes our previous response to IE Bulletin No. 79-07, AEP:NRC:00186, dated April 24, 1979. As noted earlier, we were informed by Westinghouse that in the original analysis of 24 individual piping lines performed prior to November 1971, an earlier version of the WESTDYN program which incorporated the algebraic sum of intramodal responses had been used. However, a complete check of our records (not possible within the very short time allowed to prepare transmittal AEP:NRC:00186) has shown that 23 of the 24 piping lines had been subsequently reanalyzed using the absolute summation or the SRSS technique. The support design for all 23 lines was based on the reanalysis done using the correct method of summation of seismic forces. We, thus, conclude that these piping systems and their supports are capable of withstanding the seismic event. Please note that our original search to prepare AEP:NRC:00186 had uncovered only 19 individual piping lines that had been reanalyzed.

The remaining piping system that still required reanalysis was the 14" pressurizer surge line (see Table I of Attachment III to Reference (1)). The reanalysis has been completed by Westinghouse and the results are as shown in Attachment I. As noted in the attachment, all the stresses for the piping and the pipe supports are within the allowable limit (only a 10.3% increase in the seismic stress) and, thus, capable of withstanding the seismic event.

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Mr. J. G. Keppler

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As a result of all of the above and of Reference (1), we conclude that the capability of the Donald C. Cook Nuclear Plant to withstand a seismic event is not adversely affected.

Very truly yours,



F. N. Bien
Vice President

FNB:em

Mr. J. G. Keppler

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ATTACHMENT ISTRESS SUMMARY FOR PRESSURIZER
SURGE LINE - MAXIMUM STRESSES
FROM REANALYSIS

	LOCATION	CALCULATED STRESS/LOAD	ALLOWABLE STRESS/LOAD	MARGIN
OBE	Piping	8911 PSI	19200 PSI	10289 PSI
	Interface pipe/pres- surizer nozzle	8278 PSI	19200 PSI	10922 PSI
	Pipe Support	11.04 KIPS	70.0 KIPS	58.96 KIPS.
DBE	Piping	11933 PSI	28800 PSI	16867 PSI
	Interface pipe/pres- surizer nozzle	10665 PSI	28800 PSI	18135 PSI
	Pipe Support	15.37 KIPS	70.0 KIPS (conservative)	54.63 KIPS