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 AUTH. NAME AUTHOR AFFILIATION
 ALEXICH, M. P. Indiana & Michigan Electric Co.
 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H. R. Office of Nuclear Reactor Regulation, Director (post 851125)

SUBJECT: Informs of removal of automatic trip on low suction pressure in auxiliary feedwater (AFW) sys. Trip does not enhance capability of AFW sys. Alarm/operator-action will replace trip function.

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INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631
COLUMBUS, OHIO 43216

June 13, 1986
AEP:NRC:0976

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
AUXILIARY FEEDWATER SYSTEM LOW SUCTION
PRESSURE PUMP TRIP

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Denton:

Pursuant to our discussion with the NRR staff on May 5, 1986, this letter is to inform you that we are revising our response to long-term recommendation GL-4 contained in Mr. D. G. Eisenhower's letter of October 30, 1979. In the attachment to our letter of December 11, 1979 (AEP:NRC:00300), we stated that we had decided to install an automatic trip on low suction pressure in the auxiliary feedwater (AFW) system. We have decided to remove this automatic trip, as we have determined that this trip does not enhance the capability of the AFW system, but may in fact detract from the system's reliability. This determination is supported by industry experience as well as an INPO report on the operational performance of AFW systems in U.S. PWRs (INPO 85-036, September 1985). It is our intention to use an alarm/operator-action combination in place of the automatic trip function.

Our decision to remove the low suction pressure trip function is based on the following points:

- (1) The primary sources of water for the AFW systems are the condensate storage tanks (CSTs). These tanks are qualified to withstand an operating-basis earthquake and have also been analyzed to show that they are capable of withstanding a design-basis earthquake (DBE). The suction piping from the tanks to the pumps has been analyzed to withstand the loads due to a DBE.
- (2) The probability of a tornado (or a tornado-generated missile) causing damage to the CSTs is very low. Section 2.2 of the Cook FSAR cites a recurrence frequency for a tornado at the site itself of over 1,000 years.
- (3) The Cook Plant has several indications which alert the reactor operators to low level in the CST. Even in the extreme case in which the tank water level drops to the low suction pressure alarm level (612'-0") and the AFW system is at full-flow conditions, there is approximately a 14-minute time period before the tank water level drops to the centerline of the CST outlet pipe (610'-3"). (The pump

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suction centerline is at 593'-2".) This enables the operators to take appropriate measures to ensure an adequate supply of water for the AFW pumps. The attachment to this letter shows the estimated times for the tank level to drop from alarm to the CST outlet centerline as well as the dimensions of the tanks.

This document has been prepared following Corporate procedures which incorporate a reasonable set of control to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,

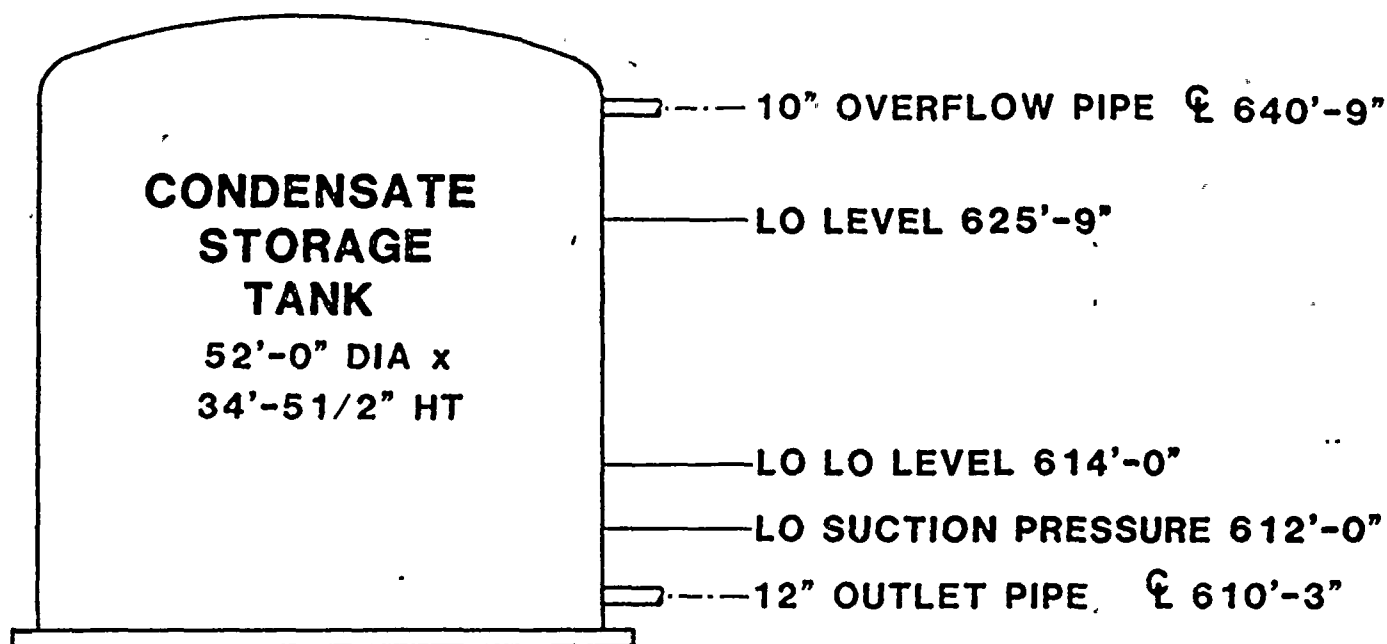

M. P. Alexich *PAK*
Vice President *6/12/86*

MPA/pm

Attachment

cc: John E. Dolan
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - Bridgman

CONDENSATE STORAGE TANK ALARMS



TIME REQUIRED FOR TANK LEVEL TO DROP FROM ALARM TO OUTLET CENTERLINE

ALARM	TIME* (MINUTES)
LO SUCTION PRESSURE	13.9
LO LO LEVEL	29.8
LO LEVEL	123.1

* TIME ESTIMATE IS BASED ON A CONSERVATIVE
TANK OUTFLOW OF 2000 GPM

