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 AUTH. NAME AUTHOR AFFILIATION
 ALEXICH, M. P. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP. NAME RECIPIENT AFFILIATION
 MURLEY, T. E. Document Control Branch (Document Control Desk)

SUBJECT: Responds to 871207 request for addl info re request for code relief extension re inservice testing. Revised analysis which allows operation w/RHR or safety injection crosstie valves closed currently being pursued.

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AEP:NRC:0969L

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
INSERVICE TEST (IST) - ADDITIONAL INFORMATION
FOR CODE RELIEF EXTENSION

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Attn: T. E. Murley

December 9, 1987

Dear Dr. Murley:

This letter responds to your staff's December 7, 1987 request for additional information on our request for code relief extension contained in our letter AEP:NRC:0969I, dated November 20, 1987.

Background

In AEP:NRC:0969I, we requested an extension of relief for four valves in the Residual Heat Removal (RHR) System that our Inservice Testing (IST) Program requires us to stroke quarterly. Temporary relief had previously been granted by the NRC for the four valves in a letter from B. J. Youngblood to John E. Dolan, dated December 19, 1986. In AEP:NRC:0969I, we proposed to continue testing the valves during refueling outages or during intervening outages of sufficient duration when the plant is in a condition which would accommodate the testing. (Testing frequency would not exceed once per 92 days in the event of frequent outages, however.) In a telephone conversation on December 7, 1987, your staff requested additional information on why valves IMO-340 and 350 could not be tested during power operation.

Information Requested

Valve IMO-340 is located in the discharge from the East RHR pump (downstream of the heat exchanger) to the suction of the centrifugal charging pumps. IMO-350 is located in the discharge

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from the West RHR pump (downstream of the heat exchanger) to the suction of the safety injection (SI) pumps. Both of these valves are normally closed during power operation, and would be opened during the recirculation phase of a LOCA to allow the RHR pumps to provide water from the containment recirculation sump to the charging pump (IMO-340) and SI pump (IMO-350) suctions. The valves are each interlocked with valves IMO-262 and 263. IMO-262 and 263 are located in series in the safety injection pump mini-flow (recirculation) line to the refueling water storage tank. These normally open valves protect the SI pumps from dead-heading in the event the pumps start while the reactor coolant system pressure is above the pump shutoff pressure, and are required by Technical Specification (T/S) 4.5.2.a to be open, with control power locked out, while the unit is in Modes 1, 2, or 3. In order to open IMO-340 or 350, it is necessary to first close either IMO-262 or 263. Since IMO-262 and 263 are in series, closing these valves renders both SI pumps inoperable, and thus places the unit in T/S 3.0.3, which allows one hour to restore the SI pumps to operable status or begin a unit shutdown.

The valve and equipment lineup necessary to perform testing of IMO-340 and 350 is complex because of the various interlocks associated with the valves. In addition to both SI pumps being inoperable, one train of RHR would also be rendered inoperable by the required valve lineup. The complicated lineup makes it unlikely that the testing can be completed within the one hour time limit of T/S 3.0.3. For this reason, we do not believe valves IMO-340 and 350 can be tested without having to institute a unit shutdown.

As discussed in our letter AEP:NRC:0969I, we are currently pursuing revised analyses which will allow us to operate with the RHR or SI cross-tie valves closed. The revised analyses may make it feasible to perform testing of IMO-340 and IMO-350 at power. We will continue to investigate this possibility, and will advise you of our conclusions at the time the cross-tie analyses are submitted. If our review determines that it still is not prudent to test IMO-340 and 350 at power, we will request a permanent change in our IST program to require testing of these valves during cold shutdowns, instead of quarterly.

We note that it may be possible to perform the testing of IMO-340 and 350 by jumpering the interlocks associated with IMO-262 and 263, thus avoiding having to close these valves. However, jumpering the valve interlocks would be considered maintenance per Article IWV-3200 of Section XI of the ASME Boiler and Pressure Vessel Code. This article would then require testing of the interlock function (including closing IMO-262 and 263) once the

Dr. T. E. Murley

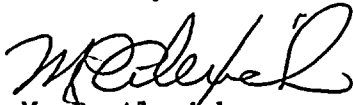
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jumpers were removed before the equipment could be considered operable. This post-maintenance testing would require entry into T/S 3.0.3, and thus places the unit in the same position as does testing without jumpering out the interlocks.

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

Sincerely,



M. P. Alexich
Vice President

cm

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