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 AUTH. NAME AUTHOR AFFILIATION
 HUNTER, R.S. Indiana & Michigan Electric Co.
 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Notifies that incorrect statement re isolation function of containment area Monitor R-2 was made in 780501, 0608 & 1205 ltrs. Monitor R-2 does not automatically initiate closure of four containment instrument room valves.

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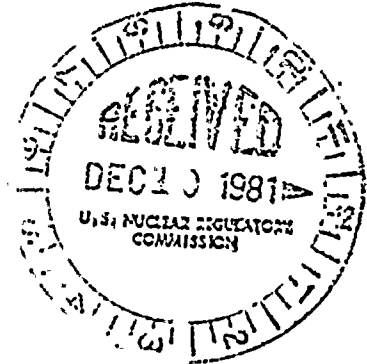
INDIANA & MICHIGAN ELECTRIC COMPANY

P. O. BOX 18
BOWLING GREEN STATION
NEW YORK, N. Y. 10004

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Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74

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



Dear Mr. Denton:

This letter is to inform you of an incorrect statement made in three past submittals regarding the isolation function of the Containment Area Monitor (R-2) in Units 1 and 2 of the Cook Plant.

The Post-TMI radiation monitoring requirements have caused us to initiate extensive design modifications to the Cook Plant's Radiation Monitoring System (RMS). During a recent design review of the upgraded RMS it was found that, contrary to our previous belief that the three containment radiation monitoring channels R-2, R-11 and R-12 automatically initiated closure of all 14 containment purge supply and exhaust isolation valves, R-2 does not automatically initiate closure of the four (4) Containment Instrument Room valves. Each of the Instrument Room purge supply and exhaust lines has two 14" automatic isolation valves in series, one inside containment the other outside containment.

The three submittals mentioned above are: 1) our May 1, 1979 letter (AEP:NRC:00185) responding to Action Item 9 of IE Bulletin No. 79-06A, 2) our June 8, 1979 letter (AEP:NRC:00114A) on the matter of containment purging during normal plant operation, item 3, and 3) our December 5, 1979 letter (AEP:NRC:00295A) providing additional information on the RMS as it relates to purge system operation. These three letters used as reference a common set of functional logic diagrams which has been found to be in error. In the three letters we made basically similar statements concerning the initiation of a Containment Ventilation Isolation (CVI) signal to trip closed all 14 containment purge supply and exhaust isolation valves.

The functional logic diagrams used showed R-2 as one of the many inputs to generate a CVI signal. The CVI output is wired into each of the control circuits of the 14 purge isolation valves

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including the Instrument Room. However, the output signal from R-2 is wired directly into each of the control circuits of 10 purge isolation valves and excludes the Instrument Room valves. Please note that the Instrument Room, while located physically within the containment, is separate from the upper and lower containment. It was judged originally that a potential high radiation condition should not immediately impact required work that would be in progress in the Instrument Room by stopping its purge system. On this basis, the tripping function of R-2 was designed to allow Instrument Room purging independent of that in the upper and lower containment. If the air particulate or radiogas channels (R-11 or R-12) initiated a CVI signal, the Instrument Room purge system would immediately shut down and its purge isolation valves would close. Hence, protection from a high containment radiation condition was always afforded.

Our review of the safety significance of R-2 not tripping closed the four Instrument Room purge isolation valves shows that only one of the many levels of defense designed into CVI is slightly degraded from what we had previously stated. The CVI signal from the Reactor Protection System is automatically initiated from a variety of inputs which cause Safety Injection to occur (such as low pressurizer pressure, high differential pressure between steamlines, lower containment pressure - high, etc) thus still maintaining a diversity of containment purge isolation signals. The radiation monitor inputs R-2, R-11 and R-12 are provided in the design as an additional means of enhancing the overall defense-in-depth philosophy already provided by other multiple inputs. As mentioned before, 10 of the 14 purge isolation valves receive a trip-close signal from R-2 when the key lock control switch is in the refueling mode. During the period when the three above-mentioned submittals were prepared, the functional logic diagrams were easily accessible and they were used to provide the requested quick turnaround in responding to the NRC concerns. However, the functional logic diagrams are not design documents and are generally not kept up-to-date nor do they undergo the reviews used for electrical design documents. Although the three above-mentioned letters were submitted with an improper reference used to generate parts of them, the design of CVI in the Cook Plant which incorporates inputs from diverse plant parameters including R-11 and R-12 at no time presented a situation that would endanger the health and safety of the public. We are processing a Licensee Event Report on this matter for submittal in 30 days to NRC Region III in accordance with our Technical Specifications.

We are taking the necessary steps to have R-2 initiate CVI in our RMS design. Until such a design change is implemented we will maintain the purge isolation valves closed in the Instrument Room in operating modes 1, 2, 3 and 4. This restriction applies to both Units 1 and 2 except during normal surveillance testing of the valves. Upon implementation of the above mentioned design change the restriction will no longer be applied.

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.

Very truly yours,



R. S. Hunter
Vice President

cc: John E. Dolan - Columbus
R. W. Jurgensen
D. V. Shaller - Bridgman
R. C. Callen
G. Charnoff
Joe Williams, Jr.
James G. Keppler - Director of U.S. NRC Region III
NRC Resident Inspector at Cook Plant - Bridgman

