



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

August 10, 1989

Docket Nos. 50-315
and 50-316

Mr. M. P. Alexich, Vice President
Indiana Michigan Power Company
Post Office Box 16631
Columbus, Ohio 43216

Dear Mr. Alexich:

SUBJECT: COMMENTS ON THE INDIANA MICHIGAN POWER COMPANY RESPONSE TO
GENERIC LETTER 88-17 WITH RESPECT TO EXPEDITIOUS ACTIONS
FOR LOSS OF DECAY HEAT REMOVAL FOR D.C. COOK NUCLEAR PLANT
UNITS 1 AND 2 (TAC NOS. 69736 AND 69737)

The NRC staff has reviewed your response (letter of January 9, 1989) to Generic Letter (GL) 88-17. We find that it appears to meet the intent of the generic letter with respect to expeditious actions. Your response to some items is brief and therefore does not allow us to fully understand your actions taken in response to GL 88-17. You may wish to consider several observations in order to assure yourselves that the actions are adequately addressed:

1. You mention classroom training on the Diablo Canyon event with licensed plant personnel and the Plant Nuclear Safety Committee and briefing for specific mid-loop operation and cooldown/draindown with each operating shift. Except for briefing on proper installation sequence for nozzle dams it is not specifically stated that maintenance personnel are also included. This item was intended to include all personnel who can affect reduced inventory operation.
2. You state that for some maintenance activities procedures will be implemented for a prompt containment closure within 30 minutes. In some plants the quick closing of the equipment hatch is achieved by the installation of a reduced number of bolts. If you plan to use less than the full compliment of bolts for sealing the equipment hatch then you should first verify that you can make a proper seal of the periphery mating surfaces to meet the closure criteria.
3. You state that core-exit temperature indications will be provided which will allow control room operators to have continuous, independent, representative indications. You state that prior to the next entry temperature indication will be provided either continuously in the control room or at a location outside containment with 15 minute logging. You have not indicated if there will be an alarm for the system which is monitored in the control room. You state that operations procedures will

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specify that temperature indications be periodically checked and recorded by control room personnel. For the system which is monitored in the control room, the need for frequent logging only arises for the case of loss of RHR.

4. You state that two RCS water level indications will be available whenever the plant is in a reduced inventory condition. One of these is a heavy duty rubber hose with a short span of tygon tubing between the two sight glasses used. This system, referred to as a "visual level instrument," will cover a range from the reactor vessel flange to the bottom of the hot leg. You indicate that a continuous watch is placed at the rubber/tygon hose with continuous communication to the main control room. The visual level instrument readings will be logged at 15 minute intervals inside containment for the range 3 feet below the vessel flange to the top of the hot leg. Below the top of the hot leg, continuous control room indication will be available via a remote TV camera. You have not provided a detailed description of the second type of RCS water level indicator but have indicated that it shares a common tap with the first system. Therefore, precautions will be needed to avoid a common error. You state that the second type of RCS water level indicator provides indication and alarm in the control room. We note that the rubber/tygon tube is acceptable at present but not as a candidate for use in programmed enhancements. When two instruments are in place, care should be taken to resolve any discrepancy between the two measurement system. Also, the pressure of the reference leg should approximate the pressure of the void in the hot leg or be compensated to obtain the correct level value.
5. The hose for level measurement should be verified to be free of kinks. Experience shows that periodic walkdowns are needed after installation. We recommend daily walkdowns when the level hose is in use, with an additional walkdown immediately prior to its being placed in use to verify that the hose is free of kinks or loop seals.
6. You state that procedures will be revised to require the availability of at least two means of adding water to the RCS in case both RHR pumps become inoperable. You have presented 3 options each with two means of adding inventory. The first two options include a centrifugal charging pump (high pressure) or safety injection pumps capable of injecting water into the RCS. At least one of the pumps should be lined up to inject into the hot leg if there is a cold side opening and the loop with the opening is isolated with SG nozzle dams. For the third option you state that either a safety injection pump or gravity drain from the RWST will be used. This procedure for the third option must be in place before this third option is used for reduced inventory operation. If using gravity drain from the RWST a proper means for venting must be in place and verified by calculations (see Item 7).
7. Procedures should be in place for a means of relieving pressure, such as an adequate hot leg vent, whenever the RCS is in a reduced inventory condition with all nozzle dams installed. A pressurizer manway or steam generator manway is often used as means to provide RCS venting. We note

Mr. M. P. Alexich

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that relatively large hot side openings in the RCS, such as a pressurizer manway, can still lead to a pressure of several psi. The large steam flow rate in combination with flow restrictions in the surge line and lower pressurizer hardware may lead to pressurization. Calculations should be performed to verify the effectiveness of the opening.

There is no need to respond to the above observations.

As you are aware, the expeditious actions you have briefly described are an interim measure to achieve an immediate reduction in risk associated with reduced inventory operation, and these will be supplemented and in some cases replaced by programmed enhancements. We intend to audit both your response to the expeditious actions and your programmed enhancement program. The areas where we do not fully understand your responses as indicated above, may be covered in the audit of expeditious actions.

Sincerely,



Joseph G. Gitter, Project Manager
Project Directorate III-1
Division of Reactor Projects - III,
IV, V, and Special Projects
Office of Nuclear Reactor Regulation

cc: See next page

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Original signed by:

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Division of Reactor Projects - III,
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