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 FITZPATRICK, E. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 930817 ltr re violations noted in Safety
 Insp Repts 50-315/93-16 & 50-316/93-16 on 930616-0727.
 Corrective actions: Temporary Mod Procedure PMP 5040 MOD.001
 will be revised to include precautions re potential mods.

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Indiana Michigan
Power Company
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AEP:NRC:1184F
10 CFR 2.201

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
NRC INSPECTION REPORTS NO. 50-315/93016 (DRP)
AND 50-316/93016 (DRP)
REPLY TO NOTICE OF VIOLATION

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

Attn: Mr. J. B. Martin

September 16, 1993

Dear Mr. Martin:

This letter is in response to a letter dated August 17, 1993, which forwarded a Notice of Violation. The Notice of Violation resulted from a routine safety inspection conducted by J. A. Isom, D. J. Hartland, and T. Tella on June 16 through July 27, 1993. The violations are associated with a failure to initiate a temporary modification prior to de-energizing in the open position an emergency diesel generator room ventilation damper, and failure to repair a minor pump packing leak in a reasonable time.

Our reply to the Notice of Violation is provided in the attachment to this letter.

This letter is submitted pursuant to 10 CFR 50.54(f) and, as such, an oath statement is enclosed.

Sincerely,

E. E. Fitzpatrick
Vice President

dr

Attachment

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PDR ADDCK 05000315
Q PDR

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Mr. J. B. Martin

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AEP:NRC:1184F

cc: A. A. Blind
G. Charnoff
T. E. Murley, NRC - Washington, D.C.
NRC Resident Inspector
NFEM Section Chief
J. R. Padgett

STATE OF OHIO)
COUNTY OF FRANKLIN)

E. E. Fitzpatrick, begin duly sworn, deposes and says that he is the Vice President of licensee Indiana Michigan Power Company, that he has read the forgoing response to NRC INSPECTION REPORTS NO. 50-315/93016 (DRP) AND 50-316/93016 (DRP) and knows the contents thereof; and that said contents are true to the best of his knowledge and belief.

E. E. Fitzpatrick

Subscribed and sworn to before me this 11.26

day of September, 19 93.

Rita D. Hill
NOTARY PUBLIC

RITA D. HILL
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES 6-22-94

ATTACHMENT TO AEP:NRC:1184F

REPLY TO NOTICE OF VIOLATION

Background

A routine safety inspection was conducted by J. A. Isom, D. J. Hartland, and T. Tella on June 16 through July 27, 1993.

During this inspection, two items were found to be in violation. The violations were identified as:

- (1) Failure to initiate a temporary modification prior to de-energizing in the open position an emergency diesel generator room ventilation damper.
- (2) Failure to repair a "minor" pump packing leak in a reasonable time eventually leading to a condition where the leak worsened and caused the pump outer bearing to be seriously degraded.

These violations were set forth in a letter containing the notice of violation dated August 17, 1993 from Mr. W. D. Shafer, Chief, Reactor Projects Branch 2. The letter was received August 20, 1993. Our response to the notice of violation is contained within this document.

NRC Violation I

"Unit 1 Technical Specification 6.8.1a requires, in part, that written procedures be implemented covering the activities referenced in Appendix "A" of Regulatory Guide 1.33, Rev 2, February 1978. This includes (Section 1.c) procedures for Equipment Control (e.g., locking and tagging) and (Section 1.j) procedures for bypass of safety functions.

Licensee procedure "Temporary Modification," PMP 5040 MOD.001, Revision No. 4, dated March 3, 1993, defines a temporary modification as "any short term configuration that exists on plant systems, components, or structures ... which does not conform to approved plant drawings ... and is being used to maintain operation of the plant." The definition also includes "blocked open valves" as an example of a temporary modification.

Contrary to the above, the licensee failed to initiate a temporary modification prior to de-energizing in the open position 1-HV-DGS-DAB, Unit 1 AB EDG Room Supply Damper, on February 6, 1992.

This is a Severity Level IV violation."

Response to Violation I

1. Admission or Denial of the Alleged Violation

Indiana Michigan Power admits to the violation as cited in the NRC Notice of Violation.

2. Reasons for the Violation

Investigation of this event determined that a temporary modification should have been used to de-energize and fail open the Unit 1 AB EDG Room Supply Damper. In this particular case, a Red Tag Clearance was taken out and fuses pulled to de-energize the damper control circuit and fail open the damper. The clearance was considered adequate to control the removal of power from the damper and to ensure its restoration following repair. In addition, because the damper was both out of service and placed in the open "fail safe" position, it was not considered to be a temporary modification. However, further review has determined that the clearance itself did not ensure adequate assessment of the effects of this change as are intended by the Temporary Modification process.

3. Corrective Actions Taken and Results Achieved

On February 10, 1992, the 1 AB EDG room supply damper was repaired and returned to service.

4. Corrective Actions Taken to Avoid Further Violations

A review of the Temporary Modification procedure has determined that the definition of a temporary modification, as written, is adequate. However, additional precautions or examples need to be added to the procedure to address potential modifications to systems, resulting from de-energizing equipment/components within a system to maintain operation of the plant, that are not covered by existing procedures. PMP 5040 MOD.001 will be revised to include these precautions or examples by October 15, 1993. In addition, we will look at other administrative controls to ensure proper engineering reviews are conducted for changes to system operating modes.

5. Date When Full Compliance will be Achieved

Full compliance will be achieved by October 15, 1993, with the revision to PMP 5040 MOD.001.

NRC Violation II

"Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion XVI, "Corrective Action," requires that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, and defective equipment, are promptly identified and corrected.

Contrary to the above, the Unit 2 East Motor-Driven Auxiliary Feedwater Pump (MDAFP) was identified on October 9, 1991, as having an outboard pump packing leak, but this condition was not corrected until April 20, 1993, by which time water had contaminated the bearing oil and the pump outer bearing had become seriously degraded.

This is a Severity Level IV violation."

Response to Violation II

1. Admission or Denial of the Alleged Violation

Indiana Michigan Power admits to the violation as cited in the NRC Notice of Violation.

2. Reasons for the Violation

The reason for having permitted the seal leak to exist until April 20, 1993, was due to our failure to recognize the potential for pump seal leakage to contaminate the bearing oil. This was based in part on having experienced similar leakage in the past, without adverse consequences to the bearing or bearing oil. It is not obvious from the design of the bearing housing, which incorporates a shaft flinger to limit water intrusion into the housing, that the potential for water intrusion exists. It was also based on the fact that, despite the degraded condition of the bearing, neither pump vibration nor pump hydraulic performance had exhibited any adverse trend over the year and one-half period which had elapsed between the time the seal leak repair action request was initiated and the time the bearing failure was discovered. We therefore did not assign appropriate priority to the performance of the seal repair.

3. Corrective Actions Taken and Results Achieved

On April 20, 1993, the Unit 2 East MDAFP was removed from service to correct Emergency Leakoff Check Valve (2-FW-153) leakby. This leakby condition was assigned a sufficiently high priority to warrant LCO entry in advance of the next scheduled FEG work window. The repacking of the pump was included in this work package, as was a bearing oil change. It was during the bearing oil change that the water contamination of the oil and failure of the bearing first became evident. In response to the discovery of this condition, the bearings and rotating assembly were replaced. The pump was then tested and returned to service.

A Condition Report was written on the event which initiated an in depth investigation of the root cause of the bearing failure and identification of corrective actions. As part of this investigation, oil was sampled on the other five Auxiliary Feed Pumps. Indications of bearing degradation were found on the Unit 1 East and Unit 1 West MDAFPs. The bearings on these pumps were inspected and found to be operable but degraded. The bearings were replaced before returning the pumps to service.

4. Corrective Actions Taken to Avoid Further Violations

The following corrective actions have been taken with results achieved or expected as indicated below:

A. Predictive Maintenance Improvements

As a result of the bearing failure incident, an oil sampling and analysis program has been established for all six auxiliary feedwater pumps. A plant wide program is also currently under development and will be in place by December 31, 1993. This program will augment existing vibration monitoring and IST pump performance programs to provide a more comprehensive view of equipment condition.

Routine oil sampling would have provided early indication of water contamination of the bearing oil and would have established the connection between seal leakage and bearing oil condition, which in turn, would provide the basis for assigning the proper priority to the seal repair.

B. Pump Seal and Bearing Housing

Engineering will perform a review of the Auxiliary Feed Water Pump sealing arrangement and bearing housing. The effort will be to determine if there exists a practical means of minimizing or eliminating pump seal leakage or preventing such seal leakage from entering the bearing housing. This review will be completed by December 30, 1993. Additional actions will be taken as determined appropriate by the results of the review.

C. Operator Awareness

The Auxiliary Feedwater System Engineer provided written guidance to plant Operations concerning the need to take prompt action to correct Auxiliary Feed Pump seal water leakage impingement on the bearing housing or pump shaft at the entry to the bearing housing.

5. Date When Full Compliance will be Achieved

Full compliance with the 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," will be achieved by December 30, 1993.

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