

# PRIORITY 1

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

SUBJECT: Forwards revised commitments re lube oil analysis program & info requested by staff re actions to be taken in event oil samples indicate potential pump degradation.

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AEP:NRG:1184F1

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 NOS. 50-315/93016 (DRP)  
AND 50-316/93016 (DRP): REVISED COMMITMENTS  
REGARDING LUBE OIL ANALYSIS PROGRAM

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

Attn: J. B. Martin

November 11, 1994

Dear Mr. Martin:

Our letter AEP:NRG:1184F, dated September 16, 1993, responded to a violation involving degradation of an auxiliary feedwater pump bearing. The letter contained a commitment to establish a plant wide oil sampling and analysis program. Pursuant to discussions with your staff on September 19, 1994, at your offices in Lisle, IL, the attachment to this letter contains revised commitments regarding this program, and also contains information requested by your staff regarding actions to be taken in the event oil samples indicate potential pump degradation.

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

Sincerely,

A handwritten signature in cursive script, appearing to read 'E. E. Fitzpatrick'.

E. E. Fitzpatrick  
Vice President

ar

Attachment

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Mr. J. B. Martin

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AEP:NRC:1184F1

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

STATE OF OHIO)  
COUNTY OF FRANKLIN)

E. E. Fitzpatrick, being duly sworn, deposes and says that he is the Vice President of licensee Indiana Michigan Power Company, that he has read the foregoing Revised Commitments Regarding Lube Oil Analysis Program, 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 14th  
day of November, 19 94.

Rita D. Hill  
NOTARY PUBLIC  
RITA D. HILL  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES 6-28-99

ATTACHMENT TO AEP:NRC:1184F1

REVISED COMMITMENTS REGARDING  
LUBE OIL SAMPLING AND ANALYSIS  
PROGRAM AND ACTIONS TO BE TAKEN  
IF OIL ANALYSIS INDICATES  
POSSIBLE DEGRADATION



**BACKGROUND**

Our letter AEP:NRG:1184, dated September 16, 1993, responded to a violation concerning failure of an auxiliary feedwater pump bearing. At the time, the principal contributor to the degradation of the bearing was thought to be the presence of water in the bearing oil reservoir. As part of that violation response, we committed to establishing a plant wide oil sampling and analysis program.

Subsequent to this failure, a task force was formed to make recommendations to enhance the operation and design of the auxiliary feedwater pumps. The task force activities included a thorough review of the bearing failure event. It was concluded from this review that an improperly adjusted balance drum was the primary cause of the bearing failure. Water contamination of the oil was cited as a contributing factor, as this condition may have reduced the ability of the bearing set to withstand the higher-than-normal thrust loads resulting from the misadjusted balance drum. The task force recommendations included modifying the thrust bearing assembly to reduce its sensitivity to abnormal thrust loads, and improving the stuffing box design to minimize pump leakage. These modifications were completed on the Unit 2 pumps during the 1994 Unit 2 refueling outage, and will be completed in Unit 1 during a future outage.

On September 19, 1994, discussions were held with your staff regarding the status of the oil sampling and analysis program. As a result of those discussions, we were requested to clarify our docketed commitments regarding the program, including actions we would take in the event that the oil analysis results indicate possible pump degradation. The requested information is provided below.

**REVISED OIL SAMPLING AND ANALYSIS PROGRAM COMMITMENTS**

An oil sampling and analysis program has been established for all six auxiliary feedwater pumps. These pumps are being sampled on a 12 week frequency, or sooner for emergent reasons. Since April, 1993, approximately 80 samples have been obtained from these pumps. A plant wide program has also been developed and is in the process of being implemented. This program will augment existing vibration monitoring and IST pump performance programs to provide a more comprehensive view of equipment condition. The following provides additional details regarding our current





intentions in this area. The program may change as information on program effectiveness and value are obtained, and as improved technologies become available.

1. For equipment already selected for inclusion in the program, recurring task action requests have been written to initiate the detailed planning for acquisition and processing of samples. Planning will include identification of specific sample locations and determination of conditions required to safely obtain representative samples. This planning evolution will also finalize the initial scope of the program to be committed to production. Determination of program scope will include consideration of equipment safety function, feasibility of obtaining a meaningful sample, and the costs/benefits of sampling. Job orders will be written and made ready for scheduling by December 31, 1994.
2. Job orders will be scheduled as follows:
  - a. Samples which will require the associated generating unit to be shut down will be drawn prior to the end of the next scheduled refueling outage (Unit 1 1995, Unit 2 1996).
  - b. Samples which do not require a refueling outage will be drawn before the end of the second 1995 functional equipment group cycle applicable to that equipment.
3. The program was revised to delineate responsibilities and procedures for engineering review of results and initiation of follow-up/corrective actions. This revision was in place by October 31, 1994. Our existing corrective action system will be used to guide our actions in the event the oil sample indicates degradation. A condition report will be written upon finding and confirming an unexpected failure.

Also as agreed in our September 19, 1994, meeting, we will periodically update the Senior Resident on our progress with this plan.

