

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Reports No. 50-315/81-02; 50-316/81-02

Docket Nos. 50-315; 50-316

Licenses No. DPR-58; DPR-74

Licensee: American Electric Power Service Corporation  
Indiana and Michigan Power Company  
2 Broadway  
New York, NY 10004

Facility Name: D. C. Cook Nuclear Plant Units 1 and 2

Inspection At: D. C. Cook Site, Bridgman, MI

Inspection Conducted: January 13, 1981

Report Prepared By: *D. C. Boyd*  
D. C. Boyd, Chief  
Reactor Projects Section 4

2/9/81

Approved By: *R. F. Heishman*  
R. F. Heishman, Chief, Reactor  
Operations and Nuclear Support  
Branch, RIII

2/9/81

Inspection Summary

Inspection on January 13, 1981 (Reports No. 50-315/81-02; 50-316/81-02)

Areas Inspected: An enforcement conference was held to discuss recent operational events, at the D. C. Cook Plant, which are of concern to the NRC.

Results: No items of noncompliance were identified as a result of this meeting.

8103160994 :

## DETAILS

### 1. Attendance

#### American Electric Power Service Corporation Indiana and Michigan Electric Company

J. E. Dolan, Vice Chairman Engineering  
R. S. Hunter, Vice President  
A. S. Grimes, Staff Engineer  
S. J. Milioti, Assistant Division Head Nuclear Engineering  
B. A. Svensson, Assistant Plant Manager  
R. S. Keith, Operations Superintendent

#### I.E. Attendees

J. G. Keppler, Director, Region III  
A. B. Davis, Deputy Director, Region III  
R. F. Heishman, Chief, Reactor Operations and Nuclear Support Branch  
C. E. Norelius, Assistant to the Director  
D. C. Boyd, Chief, Reactor Projects, Section 4  
K. R. Baker, Chief, Nuclear Support, Section 2  
E. R. Swanson, Senior Resident Inspector, D. C. Cook Plant

### 2. Areas Discussed

The Regional Director stated that the purpose of the meeting was to review two recent occurrences at the D. C. Cook Plant that resulted in reduced margins of safety. These involved valves in one containment spray system being inadvertently locked closed and questionable operability of one RHR system over several months. It was pointed out that these events appeared to constitute Severity Level III or Severity Level IV violations.

The licensee was requested to review the two events of concern and describe their corrective actions to prevent recurrence of similar types of events. These discussions were as follows:

- a. On August 4, 1980 the licensee reported (LER 80-32) that following maintenance on the East RHR Train, a surveillance test on the East RHR Pump indicated that the pump was inoperable. The cause was attributed to be due to an inadequate fill and vent procedure which left air entrapped in the suction lines to the pump. Subsequent venting and testing on August 4, 1980 resulted in the pump being declared operable. Followup of this event by NRC inspectors revealed that the East RHR Pump was again declared inoperable during the next two monthly surveillance tests because of entrapped air in the suction to the pump. This raised the NRC concern that the venting had not been

adequately performed on three successive occasions, following the original maintenance on this RHR Train. Thus, the possibility existed that this pump was inoperable for the entire period of time.

The licensee stated that they shared the NRC concern and had performed testing to assist in identifying the exact nature of the problem. This testing indicates that the source of air in the system is not residual air from the initial maintenance performed on the train, but is air introduced into the system during a portion of the monthly surveillance testing of these systems which pulls a suction on a closed check valve to verify check valve operability. Only one of the four pumps has been affected by this testing, and in each instance the air is vented from the system during the completion of the surveillance test. Thus, according to the licensee, the pump is always left in an operable status. The licensee also pointed out that each unit has two 100 percent RHR Pumps and that at no time has the operability of more than one pump at a time been in question. The licensee stated that their testing to determine how the air is being drawn into the suction of this pump is continuing and that an alternate method for verifying the operation of the check valve is being developed. In the mean time the licensee stated that the final functional test portion of each of these monthly surveillance tests verifies that each RHR Pump is left in an operable status, and that they would perform weekly functional testing of these pumps to verify continued operability.

The enforcement considerations associated with this matter will be based on the results of the licensee's further evaluations as to the effect of the air on the operability of the pumps.

- b. On December 14, 1980, while operating at full power, it was discovered that the containment upper and lower containment spray headers on the East Train in Unit 2 were isolated. The redundant West Train of the containment spray system was found to be correctly aligned. This event was reported to the NRC in LER 80-33.

The licensee could offer no excuse for this human error. The surveillance test procedure was reviewed and found to be correct, if followed. In this instance a qualified operator performed the valving associated with the performance of a surveillance test on this system. At the conclusion of the surveillance test, performed on December 4, 1980, the operator signed, and returned to his supervisor, a check list which indicated that he had opened and locked open the two valves that were subsequently found to be locked in the closed position. Appropriate disciplinary action has been taken against the operator.

The licensee stated that since that time they have initiated a double verification of all safety system alignment changes. Thus, following the re-alignment of any safety related system, a second qualified individual independently verifies that the system alignment is as required.

7

The licensee agreed that this human error did render one train of the containment spray system inoperable, but pointed out that the second 100 percent redundant train was always operable. Thus, the system performance was degraded but the safety function was not lost.

The NRC agreed with the above statement and concluded that this event constitutes a violation of category IV. The Regional Director stated that, in view of past similar problems of this type, this meeting should be viewed as an Enforcement Conference and that similar Severity IV violations in the future would likely result in escalated enforcement action.

