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

REGION III

Report No. 50-315/81-14; 50-316/81-18

Docket No. 50-315; 50-316 License 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: June 16-19, 22-23, 1981

Inspectors: M. A. Ring M A Ring 7/9/81

R. L. Spessard
D. L. Robinson for 7/13/81

Approved By: R. L. Spessard for I. N. Jackiw, Acting Chief 7/13/81
Test Program Section

Inspection Summary

Inspection on June 16-19, 22-23, 1981 (Report No. 50-315/81-14; 50-316/81-18)
Areas Inspected: Routine, announced inspection of preparations for refueling, refueling activities, refueling surveillance, and maintenance activities during the refueling outage. The inspection involved a total of 70 inspector-hours onsite by two NRC inspectors including 10 inspector-hours on off shifts.
Results: Of the four areas inspected, two apparent items of noncompliance were identified in two areas (failure to follow procedures - Paragraphs 3 and 5; failure to maintain adequate cleanliness - Paragraph 3).

DETAILS

1. Persons Contacted

*D. Shaller, Plant Manager
*E. Townley, Assistant Plant Manager
*B. Svenson, Assistant Plant Manager
*J. Stietzel, Quality Assurance Supervisor
*H. Chadwell, Outage/Design Change Coordinator
*R. Keith, Operations Superintendent
E. Abshagen, Assistant Outage Planning Coordinator
D. Dudding, Maintenanace Superintendent
H. Bolinger, In-service Inspection Coordinator

Additional plant technical and administrative personnel were contacted during the course of the inspection by the inspector.

*Denotes those attending the exit interview.

2. Preparation for Refueling (Unit 1)

The inspectors verified that technically adequate procedures for Unit 1 cycle V-VI were approved for fuel handling, transfers, core verification, inspection of fuel to be reused and handling of other core internals. These procedures were in a large part incorporated in the vendor Refueling Procedure FP-AEP-R5 which the inspectors verified to have been reviewed and approved by the licensee in accordance with Technical Specifications. The inspectors verified that the licensee had submitted a proposed core reload Technical Specification change to NRR. The inspectors also reviewed the licensee's program for overall outage control.

No items of noncompliance or deviations were identified.

3. Refueling Activities

The inspectors verified that prior to the handling of fuel in the core, all surveillance testing required by the Technical Specifications and licensee's procedures had been completed. The inspectors verified that during the outage the periodic testing of refueling related equipment was being performed as required by Technical Specifications. The inspectors reviewed the qualifications of the refueling contractor personnel and verified that licensee staffing during refueling was in accordance with Technical Specifications and approved procedures. The inspectors also observed portions of three shifts of fuel handling operations (removal, inspection and insertion). Prior to fuel handling operations actually starting and with the reactor head removed, the inspectors made a tour of the Unit 1 containment on June 17, 1981 and noted the following items:

a. A radiation protection technician carried a hand-held radiation meter (Teletector) across the manipulator crane bridge and around the refueling cavity without the meter being lanyarded to either the individual or a fixture.

b. On the left side of the refueling cavity (as seen from containment access) four five-gallon poly bottles and a one quart bottle were left within the safety railing and not tied down.

c. On either side of the containment, within the safety railing, radiation protection areas had been created. On the tour, four duck feet were noted loose on the left side of the cavity. On both sides, poly bags had been taped to the safety railing to serve as trash containers. The taping was done in such a manner as to make full bags (which was the condition during the tour) very susceptible to spilling over into the cavity pool.

d. At least seven pens (including a metal-encased felt marker) were observed in use in the upper volume.

e. On the left side of the cavity (as seen from containment access) outside of the safety railing, a pile of debris had accumulated. Pieces of herculite, tape, empty tape cores, rubber gloves, and paper were lying in disarray and were wet with condensation and dripping from a valve station directly overhead.

These items were contrary to licensee procedures FP-AEP-R5, Refueling Procedure, and PMSI-069, Unit 1 Refueling Outage which require loose article controls such as; lanyards tied from hand tools to the person using them or to a permanent fixture; the banning of pens and marking materials which will not float from the upper volume; loose materials and equipment removed or placed in a location where there is no possibility that they might become accidently dislodged and fall into the reactor cavity; eyeglasses securely attached to the wearer; and dosimetry securely taped to anti-contamination clothing (Anti-C's).

Following the June 17, 1981 tour, the problems noted were discussed with the licensee management and the licensee took some immediate steps to correct part of the problem (such as removal of the trash). However, on June 21, 1981, a contractor individual dropped his eyeglasses into the refueling pool, and on June 22, 1981, a headset was pulled off of the SRO-Core Alterations and into the pool. During a dayshift tour on June 22, 1981, five individuals were noted in the containment without dosimetry taped to their Anti-C's, and a rag and two pieces of tape were noted floating in the pool over the fuel transfer canal area. During a nightshift tour on June 22, 1981, an additional five individuals were noted without dosimetry taped to their Anti-C's, and one individual was noted carrying two hand tools around the cavity edge without lanyards.

The lack of an adequate program to maintain cleanliness and enforce the licensee's own procedures as required by ANSI N45.2.3 is inconsistent with 10 CFR Part 50, Appendix B, Criterion II, and is considered to be an item of noncompliance (315/81-14-01). It should be noted that previous inspection reports 316/81-08, 315/81-12 and 315/80-01 discussed similar cleanliness and loose articles control problems.

4. Maintenance-Refueling

The inspectors reviewed the reactor coolant pump seal inspections, main steam isolation valve disc guide replacement and drain line removal, and the RHR relief valve replacement maintenance work items in order to determine whether the maintenance procedures included administrative approvals for removal and return of systems to service; hold points for inspection/audit and sign-off by QA or other licensee personnel; provisions for operational testing following maintenance; provisions for fire watch responsibilities; review of material certifications; provisions for assuring LCO requirements were met during repair; provisions for housekeeping during and following maintenance; and responsibilities for reporting defects to management. The inspectors observed portions of the main steam isolation valve and RHR relief valve work items to ensure the work was being accomplished in accordance with approved procedures.

No items of noncompliance or deviations were identified.

5. Surveillance-Refueling

The inspectors observed the Emergency Diesel Generator System Periodic Inspection, 12MHP5021.032,001L on Unit 1 for the CD Diesel to verify that the operation was covered by properly approved procedures; that the procedures used were consistent with regulatory requirements, licensee commitments, and administrative controls; that minimum crew requirements were met, prerequisites were completed, special test equipment was calibrated and in service, and required data was recorded for final review and analysis; that the qualifications of personnel conducting the inspection were adequate; and that the results were adequate.

During the Diesel Generator Inspection review, the inspectors noted that procedure No. PMP2110.CPS.001, Clearance Permit System, requires the following:

> "When an Emergency Diesel Generator is to be removed from service the other Emergency Diesel Generator for that Unit is to be proven operable and will then be left running until the diesel engine being removed from service has been isolated, the Clearance Permit tags placed as required, and the Clearance Permit has been accepted by the individual who will be performing the designated work.

From a review of the clearance permit, the system operating logs and interviews with system operators, it appears the licensee did not comply with the above requirement when the CD diesel generator was removed from service on June 16, 1981, since the last running of the AB diesel generator occurred on June 13, 1981. Failure to follow the requirements of procedure PMP2110.CPS.001 is inconsistent with the Technical Specifications for Unit 1, Section 6.8 and is considered to be an item of noncompliance (315/81-14-02).

6. Damaged Fuel Assembly

During refueling operations on June 19, 1981, a fuel assembly was damaged by striking a shield wall retaining lip located in the refueling cavity approximately six inches high and several feet west of the reactor vessel. The assembly was being transported towards the fuel transfer area by the manipulator crane, but a fouled interlock had apparently allowed the gripper "full up" indicating light to come on without the assembly being fully inside the gripper tube. As a result of the collision, one rodlet from the 15 x 15 assembly dropped to the cavity floor and lodged behind a ladder. Three other rodlets appeared bent. Because the process of retrieving the dropped rodlet and analyzing the circumstances surrounding the event were not complete at the time of the exit, it was agreed that the Senior Resident Inspector would provide the complete documentation of the event in his report.

7. Unit 2 - Refueling

While reviewing Unit 1 refueling operations, the inspectors also reviewed some Unit 2 correspondence which raised additional concerns regarding the adequacy of the review process for the Unit 2 Cycle 3 Reload core relative to 10 CFR 50.59.

On March 17, 1981, a memo was issued from J. I. Castresana, Nuclear Safety and Licensing Section Head (Corporate) to J. F. Steitzel, Quality Assurance Supervisor (Plant) stating that a meeting of the NSDRC had been held on that date and that it had concluded that the Unit 2 Cycle 3 Reload "does not pose an unreviewed safety question and that no Technical Specification changes are needed." The memo referenced the Westinghouse reload safety evaluation report. The inspector reviewed the minutes of the NSDRC meeting and noted that similar wording regarding no unreviewed safety question and no Technical Specification changes was used. On May 1 and May 7, 1981, letters were sent from R. S. Hunter, Vice President of Indiana and Michigan Electric Company to Harold R. Denton, Director of NRR of the NRC requesting Technical Specification changes for Unit 2 as a result of the Cycle 3 Reload. The May 7 letter referenced the "Reload Safety Evaluation for D. C. Cook Nuclear Plant, Unit 2, Cycle 3" which was dated December 1980. This evaluation had indicated that Technical Specification changes would be required and had been issued prior to the NSDRC meeting and subsequent memo. The inspectors were unable to obtain a satisfactory explanation

of the above sequence of events. Therefore, the licensee is being requested to provide the inspectors with details of how the NSDRC and the Nuclear Safety and Licensing Section developed and issued two contradictory assessments of the Unit 2 Cycle 3 Reload utilizing apparently the same Reload Safety Evaluation Report. This item is an unresolved item (316/81-18-01) pending receipt and evaluation of the requested information.

8. Unresolved Item

Unresolved Items are matters about which more information is required in order to ascertain whether they are acceptable items, Items of Noncompliance, or Deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 7.

9. Exit Interview

The inspectors met with licensee representatives denoted in Paragraph 1 at the conclusion of the inspection on June 23, 1981. The inspectors summarized the purpose and the scope of the inspection and the findings. The licensee acknowledged the inspectors' statements with respect to the items of noncompliance (Paragraphs 3 and 5). Additionally, the unresolved item (Paragraph 7) was discussed in a telephone conversation conducted on July 2, 1981.