

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

REGION III

Reports No. 50-315/81-09; 50-316/81-13

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: Donald C. Cook Nuclear Power Plant, Units 1 and 2

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

Inspection Conducted: May 3-30, 1981

Inspectors: E. R. Swanson

N. E. DuBry

Approved By: D. W. Hayes, Chief  
Reactor Projects Section 1B

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Inspection Summary

Inspection on May 3-30, 1981 (Reports No. 50-315/81-09; 50-316/81-13)

Areas Inspected: Routine, onsite regular and backshift inspection by the resident inspectors. Areas inspected include Operational Safety Verification, Inspection during Long Term Refueling Shutdown, Monthly Surveillance Observation, Monthly Maintenance Observation, Review of Plant Operations, Containment Integrated Leak Rate Test and Plant trips. The inspection involved a total of 152 inspector-hours onsite by two NRC inspectors including 44 inspector-hours during off-shift hours.

Results: Of the nine areas inspected no items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

- \*D. Shaller, Plant Manager
- \*B. Svensson, Assistant Plant Manager
- \*E. Townley, Assistant Plant Manager
  - R. Keith, Operations Superintendent
  - E. Smarella, Technical Superintendent
  - R. Dudding, Maintenance Superintendent
- \*J. Stietzel, QA Supervisor

The inspectors also conducted a number of interviews with operators, technicians, and maintenance personnel during the inspection.

\*Denotes those present during the exit interview.

### 2. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the month of May 1981. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of Unit 2 Reactor Containment, the Auxiliary Building, and turbine building were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the month of May 1981, the inspector walked down the accessible portions of the Unit 2 Component Cooling Water System to verify operability. The inspector also witnessed portions of the radioactive waste system controls associated with radwaste shipments and barreling.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under technical specifications, 10 CFR, 49 CFR and administrative procedures.

### 3. Inspection During Long Term Refueling Shutdown

The inspectors observed the refueling shutdown control room operation of Unit 2, reviewed applicable Logs, and conducted discussions with operators and others during May 1981. These inspections included checks of the operability of selected emergency systems and review of the Licensee's control of the overall outage program. The inspectors verified that surveillance testing required by Technical Specifications and licensee's procedures were completed, and verified that the activities were performed in accord with approved procedures and technical specifications.



Observations of radiation protection controls, station security plan and radioactive waste controls were also made.

4. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with technical specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspector also witnessed portions of the following test activities including those scheduled and performed during the refueling outage of Unit 2:

2 THP 6040 PER.059	Zero Power And Power Ascension Test
1 OHP 4030 STP.020	Component Cooling Water System Test (Quarterly Valve Check)
2 THP 4030 STP219	RCS Flow Verification

5. Monthly Maintenance Observation

Station maintenance activities of safety related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and, fire prevention controls were implemented.

Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety related equipment maintenance which may affect system performance.

The following maintenance activities were observed/reviewed:

1. Repair and replacement of FRV-240 (Feed Regulator Valve) solenoid and effected diodes. (Unit 2)

2. Repair of Trip Breaker Bypass "A" contacts. (Unit 2)
3. Repair of Control Bank "C"/Control Bank "D" overlap sequencing logic. (Unit 2)
4. 12 MHP 4050 FDF "New and Spent Fuel Handling Crane Operation and Instructions" - Movement of new fuel from the vault to the pool. (Unit 1)

With the exception of the repair effort on FRV-240 the inspector found the systems were properly returned to service following maintenance. In the repair effort on FRV-240, although the repair and return to service was professionally done, the licensee failed to conform to administrative procedures. Specifically "Stores Material Issuing Control (12 AHP 3130 SMC.005) was not adhered to in that the stores issue for a replacement solenoid coil was missing a job order designation. An Emergency Job Order (Job Order, PMS0 2290) for the work effort was not initiated until seven days later when the resident inspector identified the lapse during his inspection follow up. It was also noted during this effort that diodes used in the repair effort were not issued from stores but were obtained from shop spares which had been cannibalized from other circuits no longer in use. Immediate corrective action was taken by the licensee by initiating the proper paperwork according to procedures.

#### 6. Review of Plant Operations

During the refueling outage for Unit 2 (Cycle 2/3) the inspectors observed administrative controls, maintenance work, procedural compliance, and Technical Specification adherence. Following the outage the inspector walked down portions of the Nuclear Instrumentation and Emergency Power, systems. The inspector reviewed selected startup procedures to verify required surveillance tests were accomplished and that the startup was performed in accordance with technically approved procedures.

#### 7. Licensee Event Reports

Through direct observations, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with technical specifications.

##### Unit 2

LER 80-036/03L-0

Monthly Functional Test of Source  
Range Nuclear Instrument not performed

During Technical Specification (T.S.) reviews prior to initial criticality this surveillance requirement (Item 6 of T.S. Table 4.3-1) was omitted from the licensee's surveillance program for Unit 2. Until



it's discovery by the licensee it had apparently not been performed other than as required prior to start-up. This event was in noncompliance with Limiting Condition for Operation 3.3.1.1 (Table 4.3-1 Item 6).

LER 80-038/03L-0

Main Feedwater Check Valves not tested as required by T.S. 4.05 (ISI)

The valve tests were missed due to the check sheet for the test including three parts: a quarterly test, one to be done while in Mode 3 and one to be done in Mode 1. Allowing portions of the page to be declared not applicable ("N.A.") permitted a review of the sheet with a completion signature at the bottom to be taken for a completed test of all necessary parts. This event was in noncompliance with Specification 4.05. The specific problem was corrected by putting the Mode 1 requirement on a separate check sheet.

#### Unit 1

LER 80-038/03L-0

ESW Valve Cycling Surveillance missed.

During the period of February 13, 1979 to December 23, 1980, the requirements of Surveillance 4.7.4.1a.4 were performed on a 92 day instead of 31 day frequency. Review of the plant records showed that the faulty procedure was approved by the Plant Nuclear Safety Review Committee (PNSRC) on February 13, 1979, though there was no record of review pursuant to 10 CFR 50.59 available in the files. The event was identified by the offsite review committee during a formal audit conducted in December 1980, but not recognized as reportable for three months.

This event is in noncompliance with Technical Specification 4.7.4.1. The procedure (01 OHP 4030 STP.022) has been revised and now accurately reflects the requirements of T.S. 4.7.4.1a.4. The issue of the missing 10 CFR 50.59 review and adequacy of PNSRC reviews is unresolved pending inspection of corrective actions taken to address a similar violation detailed in IE Inspection Reports No. 50-315/81-03-01, 50-316/81-03-01.

These three Licensee Event Reports when combined with the results of other recent Inspection and Enforcement inspection findings (Reports No. 50-315/80-20, 50-316/80-16, 50-315/81-11 and 50-316/81-14) generate acute concerns over the adequacy of the Surveillance Program at the D. C. Cook Plant. In a response, dated May 28, 1980, to the Transmittal

letter for IE Inspection Report No. 50-315/80-01 and No. 50-316/80-01, the licensee indicated that a review of Technical Specifications (T.S.) requiring Surveillance Testing was conducted by cognizant Department Heads and that the Plant's Surveillance Program was revised to include all T.S. requirements. More thorough corrective action is expected relative to the above three LERs. This matter is considered open pending further review. (50-315/81-09-01, 50-316/81-13-01)

1/ AEP:NRC:0044, May 28, 1980.





8. Containment Intergrated Leak Rate Test

The inspector witnessed portions of the CILRT on May 1, 2, and 4, 1981, and verified that the appropriate revision of procedure 12 THP 4030 STP.202 was in use, test prerequisites were met, and proper plant systems were in service.

The inspector reviewed interim and final licensee data and forwarded raw data to the regional USNRC office for agreement computations. (Reference IE Report No. 50-316/81-09)

9. Receipt of New Fuel

The inspector verified prior to receipt of new fuel that technically adequate, approved procedures were available covering the receipt, inspection, and storage of new fuel; observed receipt inspections and storage of new fuel elements and verified these activities were performed in accordance with the licensee's procedures.

10. Plant Trips

Following the plant trips of Unit 2 on May 21, 23, and 30, 1981, the inspectors ascertained the status of the reactor and safety systems by observation of control room indicators and discussions with licensee personnel concerning plant parameters, emergency system status and reactor coolant chemistry. The inspector verified the establishment of proper communications and reviewed the corrective actions taken by the licensee.

All systems responded as expected, and the plant was returned to operation on May 21, and 23, 1981, respectively after verifying that causal factors of the trips were identified and corrected.

11. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection and summarized the scope and findings of the inspection activities. The licensee acknowledged the inspection findings and items discussed in Paragraphs 5 and 7.

