

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

REGION III

Report No. 50-315/80-08; 50-316/80-07

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

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

Inspection Conducted: April 1 - June 15, 1980

Inspectors: *R. L. Spessard*  
R. E. Masse *for*

7/10/80

*R. L. Spessard*  
N. E. DuBry *for*

7/11/80

Approved By: *R. L. Spessard*  
D. C. Boyd, Chief *for*  
Reactor Projects Section 3-1

7/10/80

Inspection Summary

Inspection on April 1-June 15, 1980 (Report No. 50-315/80-08; 50-316/80-07)

Areas Inspected: Operational Safety Verification, Surveillance, Licensee Event Reports (LER's), Bulletins, Circulars, Refueling activities, unplanned release, and special reviews of purge activities and Woodward governor valves. The inspection involved 252 inspector-hours by the Senior Resident Inspector and Resident Inspector for the facility.

Results: Of the areas inspected, three items of noncompliance were identified: Lack of SRO/RO manning-infraction (Paragraph 10); inadequate logging of significant event-infraction (Paragraph 11); exceeding Technical Specification action statement due to inadequate review-infraction (Paragraph 12).

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## DETAILS

### 1. Persons Contacted

- \*D. Shaller, Plant Manager
- \*B. Svensson, Assistant Plant Manager
- \*E. Townley, Assistant Plant Manager
- \*R. Lease, Operations Superintendent
  - E. Smarrella, Technical Superintendent
  - R. Dudding, Maintenance Superintendent
  - H. Chadwell, Production Supervisor
  - C. Murphy, Production Supervisor
  - J. Stietzel, Quality Assurance Supervisor

The inspectors also contacted a number of operators, technicians, and maintenance personnel.

\*Denotes those present at one or more of the exit interviews.

### 2. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the months of April, May and June. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the auxiliary and turbine buildings and the Unit 1 containment 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, the inspector walked down the accessible portions of the Auxiliary Feedwater and Essential Service Water systems to verify operability.

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

No items of noncompliance or deviations were identified.

### 3. Monthly Surveillance Observation



The inspector observed technical specifications required surveillance testing on the Auxiliary Feedwater System 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: calibration of various safety-related instruments; ECCS associated surveillance and radiation monitoring equipment.

No items of noncompliance or deviations were identified.

#### 4. Licensee Event Reports Followup

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.

<u>Unit 1</u>	<u>Unit 2</u>	<u>Unit 2</u>
79-42/03L-0	79-13/03L-0	80-06/03L-0
79-55/03L-0	79-44/03L-0	80-07/03L-0
79-58/03L-0	79-45/03L-0	80-08/03L-0
79-66/03L-0	79-46/03L-0	80-09/03L-0
80-01/03L-0	79-47/03L-0	80-10/03L-0
80-02/03L-0	79-49/01T-0	80-11/03L-0
80-03/03L-0	79-50/01T-0	80-12/03L-0
80-04/03L-0	79-51/03L-0	80-13/03L-0
80-05/03L-0	79-52/03L-0	80-14/03L-0
80-06/03L-0	79-53/03L-0	80-15/03L-0
80-07/03L-0	79-54/03L-0	80-16/03L-0
80-08/03L-0	80-01/03L-0	80-17/03L-0
80-09/03L-0	80-02/03L-0	80-18/03L-0
	80-03/03L-0	80-19/03L-0
	80-04/03L-0	80-20/03L-0
	80-05/03L-0	80-21/03L-0

Also: Special Report SI-13 AEO 79-001/04X-0

No items of noncompliance or deviations were identified.



5. IE Bulletin Followup

For the IE Bulletins listed below the inspector verified that the written response was within the time period stated in the bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presentation in the bulletin and the licensee's response, that licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

- IE Bulletin 79-27 - Loss of Non Class 1E Instrumentation
- IE Bulletin 79-28 - Possible Malfunction of Namco EA 180 Limit Switches
- IE Bulletin 80-03 - Loss of Charcoal from Standard Adsorber Cells
- IE Bulletin 80-04 - Analysis of PWR Main Steam Line Break with Feedwater Addition
- IE Bulletin 80-09 - Hydromatic Actuator Deficiencies

No items of noncompliance or deviations were identified.

6. IE Circular Followup

For the IE Circulars listed below, the inspector verified that the Circular was received by the licensee management, that a review for applicability was performed, and that if the circular were applicable to the facility, appropriate corrective actions were taken or were scheduled to be taken.

- IE Circular 79-21 - Prevention of Unplanned Releases of Radioactivity

No items of noncompliance or deviations were identified.

7. 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; and, followed up resolutions of deficiencies as found during new fuel inspections.

No items of noncompliance or deviations were identified.

8. Preparation for Refueling

The inspector verified that technically adequate procedures were approved for the Unit 1 cycle IV - V refueling. The inspector

verified that the licensee's 10 CFR 50.59 safety evaluation of the reload core showed that prior NRR review is not required. The inspector also reviewed the licensee's program for overall outage control.

9. Refueling Activities

The inspector 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; verified that during the outage the periodic testing of refueling related equipment was performed as required by technical specifications; observed several hours of the fuel handling operations (removal, inspection and insertion) and verified the activities were performed in accordance with the technical specifications and approved procedures; verified that containment integrity was maintained as required by technical specifications; verified that good housekeeping was maintained on the refueling area; and, verified that staffing during refueling was in accordance with technical specifications and approved procedures.

No items of noncompliance or deviations were identified.

10. Procedures Review

The inspector reviewed the following procedures and verified that review and approval were in accordance with Technical Specifications.

- 2 OHP-4021.001.002 - Hot Standby to Minimum Load
- 12 OHP-4021.001.004 - Hot Standby to Cold Shutdown
- 1 OHP-4021.002.001 - Filling & Venting of Reactor Coolant System
- OHP-4021.016.004 - CCW System Operation
- 1 OHP-4021.051.001 - Placing Steam Generator's and Main Steam System in Service
- 12 OHP-4021.019.001 - Operation of Essential Service Water System
- 2 OHP-4023.001.010 - Loss of Reactor Coolant Flow
- 2 OHP-4023.017.001 - Loss of Residual Heat Removal System
- 2 OHP-4023.053.001 - Loss of Condenser Vacuum
- 1 OHP-4023.001.009 - Loss of Reactor Coolant
- 1 OHP-4022.008.002 - Initiation of Recirculation Phase
- 1 OHP-4023.001.008 - Natural Circulation
- 1 OHP-4023.001.015 - Inadequate Core Cooling
- 1 OHP-4023.001.011 - Shutdown from SDP due to Control Room Inaccessibility

The inspector verified that temporary changes were properly approved and in conformance with 10 CFR 50.59(a) and Technical Specification requirements.

No items of noncompliance or deviations were identified.





11. Inadequate Control Room Manning

Technical Specification Table 6.2-1 requires a minimum of 6 SRO/RO licensed operators for dual unit operation in mode 1. Contrary to this requirement on April 5th and 6th, 1980, only 5 licensed operators were present in the 00-08 shift. This finding is considered an item of noncompliance. The licensee identified the cause as being inattention to the schedule due to routine, steady-state operation with personnel being temporarily in training and on vacation. Corrective action was taken immediately to provide the required number of licenses and the licensee has committed to a close scrutiny of future scheduling to prevent recurrence. The inspector considers this item closed with no reply necessary.

12. Inadequate Logkeeping of Significant Activities

OHI-2211, "Maintenance of Operations Department Logs," requires significant shift activities be logged in both the applicable Control Room log and the Shift Operating Engineer's log. Contrary to the above, on May 10, 1980, Unit 2 was taken to 101% power for a short duration due to a valving error which allowed a minor dilution to take place. Neither the valving error nor the exceeding of the licensed steady-state power limit (100%) were described in either log. The licensee later agreed with the inspector that the activity should have been logged. The inspector has commented before on the lack of detail and inconsistencies shown in operations logs. This finding represents noncompliance with Technical Specification 6.8.1 requiring procedure adherence.

13. Inadequate Review of Surveillance Activity

On May 20, 1980, a retest of the Unit 2 turbine driven auxiliary feedwater pump (TDAFP) was run for the Performance section using procedure 4030.STP 017 "Auxiliary Feedwater System Test." The test details acceptance requirements which dictate the "operability" of the pump. The test was completed with a parameter not within the acceptance criteria which, by interpretation, should have made the pump inoperable. The supervisor review (SOE/OE) was not accomplished and the test result was forwarded to the Performance section where, again, it was not noted that the pump had not met its acceptance criteria (also a Technical Specification requirement). This finding represents an item of noncompliance relative to insufficient administrative control which allowed the Technical Specification action statement (3.7.1.2) to be exceeded by 4 days (TDAFP can be inoperable for 3 days). It can be noted that the pump was never taken out of service and was capable of delivering water to the steam generators if necessary.

14. Verification of Administrative Controls on Defeat of Safety Actuation Signals During Containment Purging

The inspector verified that the licensee received the Office of Nuclear Reaction Regulation (NRR) generic letter and has implemented the proper administrative controls as identified in response letter AEP: NRC:00295 dated November 8, 1979. Controls include protective covers over the Containment Ventilation Isolation reset pushbuttons; purge isolation valve circuit modifications to allow the valves to receive a close signal from a Containment Isolation-phase A signal; and additional annunciation when reset is used whether or not any automatic safety actuation signals are overridden by this action.

No items of noncompliance or deviations were identified.

15. Verification of Administrative Controls on Auxiliary Feedwater Pump Terry Turbine PG-PL Woodward Governors

A potential problem with the Woodward Governors was identified which could result with the turbine overspeeding if restarted within 30 minutes of shutting down. This results from the time required for hydraulic fluid to drain from the governor's speed setting cylinder. The inspector verified that the licensee had received this information and has established adequate administrative controls for bleeding the speed control cylinder after the equipment is shutdown. Controls include changes to procedures and a sign plate locally to identify operator actions when manually exercising the turbine driven auxiliary feedwater pumps.

No items of noncompliance or deviations were identified.

16. Unplanned Gaseous Release

On April 12, 1980, the licensee experienced an unplanned radioactive release from the auxiliary building vent stack. Investigation determined that the source was due to the opening of a relief valve on a CVCS holdup tank. The tank had been overfilled (due to an inaccurate level indication) causing a pressure buildup of cover gas which then relieved through the relief valve to the auxiliary building sump. The sump is vented to the vent stack, resulting in the release. The release was primarily Xenon-133 and Xenon-135. The maximum rate was  $3.25 \text{ E-3}$  curies per second which is 5.5% of the noble gas Technical Specification limit. The integrated release rate was  $4.51 \text{ E-4}$  curies per second which is 0.758% of the noble gas Technical Specification. The release also contained  $3.24 \text{ E-6}$  curies of Iodine-131 at a rate of  $8.17 \text{ E-10}$  curies per second which is 0.012% of the Iodine Technical Specifications. The release was sporadic in nature and lasted less than one hour. The licensee took immediate corrective action when the cause was discovered and has implemented administrative controls to preclude recurrence.



17. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the reporting period and summarized the scope and findings of the inspection activities.

