

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

REGION III

Report No. 50-316/81-09

Docket No. 50-316

License No. 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, Unit 2

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

Inspection Conducted: May 1-4 and 19, 1981

Inspectors: *R. L. Spessard*  
I. N. Jackiw *for*

6/11/81

*John B. Hopkins for*  
N. DuBry

6/11/81

Approved By: *R. L. Spessard*  
R. L. Spessard, Chief  
Engineering Inspection Branch

6/11/81

Inspection Summary

Inspection on May 1-4 and 19, 1981 (Report No. 50-316/81-09)

Areas Inspected: Routine, announced inspection of the containment integrated leak rate test. The inspection involved a total of 29 inspector-hours onsite by two NRC inspectors including 14 inspector-hours during off-shifts.

Results: No items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

- D. Shaller, Plant Manager
- A. Blind, Performance Engineering, Supervisor
- C. Litwinski, Performance Engineer

2. D. C. Cook Unit 2

Containment Integrated Leak Rate Test

a. Procedure Review

The inspector reviewed Procedure 12 THP 4030 STP. 202, "Containment Integrated Leak Rate Surveillance Test," and verified that the procedure was technically adequate and consistent with regulatory requirements.

b. Instrumentation

The inspector reviewed the calibration data associated with performing the CILRT. All the instruments used in the CILRT had been calibrated as required. The instrument calibration coefficients, RTD weighting factors, and volume weighting factors were placed into the ILRT Computer Program as required.

The following instrumentation was used in the CILRT:

<u>Type</u>	<u>Quantity</u>
RTD's	46
Flowmeter	1
Pressure Gauge	6
Dewcells	6

During pressurization, problems were encountered with the hygrometers. The hygrometers were found to be wired incorrectly to the test points on the data logger. This problem was corrected, and the licensee continued containment pressurization.

c. Witness of Test

The inspector witnessed portions of the CILRT on May 1 and 3, 1981, and noted that:

Appropriate revisions of the procedure were in use by test personnel.

Test prerequisites were met.

Proper plant systems were in service.

The inspector also noted that following pressurization, the stabilization period was begun and the weighted average temperature in the Upper, Lower and Ice Condenser compartments did not vary more than 0.1°F/hr. over the last four (4) hour period. This met the stabilization criteria established by the licensee.

d. Valve Lineups

The inspector verified that the valve lineups were conducted and documented in accordance with the approved test procedure. In addition, the resident inspector verified, by direct observation, proper valve lineups in accessible areas.

e. Blowdown and Containment Inspection

The inspector verified, that blowdown was within technical specification radioactivity release limits, analysis and calculations were completed before the release started, and that required environmental monitoring equipment was functional before the release began. The inspector also conducted an independent post CILRT containment inspection for equipment degradation after blowdown and did not identify any degradation.

f. CILRT Data Evaluation

The 24 hour CILRT was started on May 2, 1981. The inspector independently monitored and evaluated leak rate data to verify the licensee's calculation of the leak rate. There was acceptable agreement between the inspector's and licensee's leak rate calculations as indicated in the following summary (units are in weight percent per day):

<u>Measurement</u>	<u>Licensee</u>	<u>Inspector</u>
Leakage rate measured (Lam) during CILRT	0.05287	0.05478
Lam at 95% confidence level	0.05748	0.07115

Appendix J Acceptance Criterion at 95% confidence level =  $0.75 L_a = 0.75 (.25\%/day) = 0.1875\%/day$ . As indicated above, the adjusted Lam at the 95% confidence level was less than the maximum allowable by 10 CFR Part 50, Appendix J.

g. Supplemental Test Data Evaluation

After the satisfactory completion of the 24 hour test on May 3, 1981, a known leakage of 0.2006 weight percent per day was induced. The inspector independently monitored and evaluated leak rate data to verify the licensee's calculation of the supplemental leak rate. There was acceptable agreement between the inspector's and the licensee's leak

rate calculations as indicated in the following summary  
(units are in weight percent per day):

<u>Measurement</u>	<u>Licensee</u>	<u>Inspector</u>
Measured leakage (Lc) rate during supplemental test	0.2463	0.2538
Induced leakage rate (Lo) = 3 scfm (0.2006%/day)		

Appendix J Acceptance Criteria:  $Lo + Lam - 0.25 La < Lc < Lo + Lam + 0.25 La$ . As indicated above, the supplemental test results satisfied the requirements of 10 CFR Part 50, Appendix J.

No items of noncompliance or deviations were identified.

3. Exit Interview

The inspector met with Mr. D. Shaller on May 19, 1981, and summarized the findings of the inspection.