



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 162 TO FACILITY OPERATING LICENSE NO. DPR-74  
INDIANA MICHIGAN POWER COMPANY  
DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2  
DOCKET NO. 50-316

1.0 INTRODUCTION

By letter dated March 9, 1994, as supplemented April 13, 1994, the Indiana Michigan Power Company (the licensee) requested an amendment to the Technical Specifications (TS) appended to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit No. 2. The proposed amendment would revise the TS to allow a one-time extension of certain Appendix J Type B and C testing. The licensee also requested an exemption from the related requirements of Appendix J to 10 CFR Part 50. Specifically, this exemption would extend the surveillance intervals for Type B and C testing, which is required to be performed prior to May 29, 1994, for 150 days until the Unit 2 refueling outage currently scheduled to begin September 1994.

Appendix J to 10 CFR Part 50, Paragraph III.D.2.(a), states, in part, "Type B tests, except tests for air locks, shall be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years." Paragraph III.D.3., states, "Type C tests shall be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years." Taken together, these sections require Type B and C containment leakage tests to be performed at an interval not to exceed 2 years.

The 2-year maximum will be exceeded during Cook Unit 2 cycle 9 due to an equipment problem and scheduling to maximize plant efficiency. The equipment problem, which occurred after completing cycle 8, involved the turbine-generator and took 6 months to resolve. As a result, both units would have been ready for refueling outages in early 1994. In order to separate the outages, the licensee decided to extend the operating cycle for Unit 2 by operating at reduced capacity. Therefore, due to the equipment problem and subsequent cycle extension decision, the next refueling outage opportunity on Unit 2 for conducting Type B and C testing will exceed the 2-year interval since testing was last performed. As a result, the licensee has requested the subject amendment and exemption.

2.0 EVALUATION

The staff notes that the 2-year interval requirement for Type B and C component testing is intended to be often enough to prevent significant deterioration from occurring and long enough to permit the tests to be performed during plant

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outages. Leak rate testing of the penetrations during plant shutdown is preferable because of the lower radiation exposures to the plant personnel. In this instance, if the licensee chose to shut down the plant to perform the testing, the net exposure would be increased. This would occur since the testing would be performed again during the scheduled outage 100 days later.

Another reason leak rate testing is performed at shutdown is because many of the Type B and C components cannot be tested at power. The licensee states that a cooldown is necessary, and required by procedure, to avoid challenging containment integrity requirements and the associated 1 hour limiting condition for operation. If the tests are performed mid-cycle, then the presence of fuel in the vessel would impose additional safety concerns. For penetrations that cannot be tested during power operation, or for which testing at power is inadvisable, the increase in confidence in containment integrity following a successful test is not significant enough to justify a plant shutdown specifically to perform the tests so close to the end of the 2-year time period.

A review by the licensee of recent Type B and C surveillance results for Cook Unit 2 indicates generally improved performance and a low likelihood for serious degradation during the current cycle. The following provides the results of the licensee's Type B and C testing performed during 1989, 1990, and 1992:

	1989		1990		1992	
	As Found	As Left	As Found	As Left	As Found	As Left
Leak Rate	3.00 L <sub>a</sub>	0.076 L <sub>a</sub>	0.74 L <sub>a</sub>	0.17 L <sub>a</sub>	0.18 L <sub>a</sub>	0.17 L <sub>a</sub>

The results indicate a significant improvement and a good probability that the 1994 results will be below the Appendix J leak rate acceptance criteria of 0.6 L<sub>a</sub>. In addition, the licensee has taken corrective actions for several Type C valves that were found with excessive leakage in 1992. The staff notes that with the outage expected to begin at the beginning of September 1994, approximately the last third of the extension will be during the period that the unit is shut down. Since primary containment integrity is not required during cold shutdown, this period will have minimal safety significance.

Based on the above evaluation, the staff finds that the requested TS change and temporary exemption, to allow the Type B and C test intervals to be extended 150 days from their current expiration date, to be acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (59 FR 22009). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: June 1, 1994

DATED: June 1, 1994

AMENDMENT NO. 162 TO FACILITY OPERATING LICENSE NO. DRP-74-D.C. COOK

Docket File  
NRC & Local PDRs  
PDIII-1 Reading  
J. Roe  
J. Zwolinski  
L. Marsh  
R. Barrett, 8/H/7  
J. Hickman  
C. Jamerson  
OGC-WF  
D. Hagan, MNBB/3302  
G. Hill (2)  
C. Grimes, 11/F/23  
ACRS (10)  
OPA  
OC/LFDCB  
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cc: Plant Service list

