



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 97 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 October 28, 1987 the Indiana Michigan Power Company submitted a request for revision of the Technical Specifications, Appendix A to Facility Operating License DPR-74 for D.C. Cook Nuclear Plant, Unit 2. The proposed revision would extend the surveillance requirements for several items starting from December 31, 1987 to the next refueling outage currently scheduled to begin June 10, 1988. This one-time extension was requested due to operation at 80% of rated thermal power and various unanticipated outages of up to 49-day duration which resulted in a lower rate of fuel burnup. The affected Technical Specifications include:

- (1) 4.3.1.1.3            Delay time-response testing for reactor trip and engineered  
    4.3.2.1.3            safety features instrumentation
- (2) 4.5.1.d             Delay testing for equipment response to ESF signals (safety  
    4.5.2.e             injection, containment pressure high-high, containment  
    4.6.2.1.c            isolation phase A and B and purge exhaust  
    4.6.3.1.2  
    4.7.3.1.b  
    4.7.4.1.b  
    4.7.5.1.e.2  
    4.7.6.1.d.3  
    4.9.4.b  
    4.6.2.2.c
- (3) table 4.3-10        Delay reactor vessel level indication system calibration  
    item 16
- (4) table 4.3-2        Delay auxiliary feedwater system testing including channel  
    item 6.d            functional testing of loss of main feedwater pump signal  
    4.7.1.2.b
- (5) 4.8.1.1.2.c        Delay diesel generator testing including relief valve  
    4.8.1.2            testing and essential service water valve testing  
    4.4.11.3  
    4.7.4.1.b

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These items are scheduled for surveillance between December 31, 1987 and March 18, 1988. By letter dated December 23, 1987, the licensee provided additional requested details on the surveillance extension. This letter documents the understanding between the staff and IMPC.

## 2.0 DISCUSSION

This request for surveillance extension is very similar to a recent extension which was granted for D. C. Cook Unit 1. The reasons for the extension and the equipment included, with the exception of the diesel generators in this request, are the same. In discussions between the licensee and the staff, the licensee has stated that the results of the Unit 1 extension have been reviewed and no problems were discovered with operability or instrument drift for any of the items that are being requested for this Unit 2 extension. The specific Technical Specification changes are addressed below.

### (1) and (2) Reactor Trip and ESF Response Testing

The technical specifications listed in the Reactor Trip, (1), and ESF Response Testing, (2), above include the automatic initiation of valves, pumps and ventilation as detailed in the licensee's submittal. This equipment is actuated by ESF signals; SI, phase isolation, containment purge, exhaust isolation, and containment pressure high-high. Testing of these instrument loops either requires plant shutdown or removal of an entire train of safety equipment from operation. The licensee does not consider it prudent to perform this testing at power. This equipment has operated reliably since 1983 with no failures in meeting technical specification requirements due to equipment malfunction. All required channel check and channel functional checks will continue as scheduled.

### (3) Reactor Vessel Level Indication System

The required calibration for this item can be performed only during plant shutdown due to the restricted access to areas of the containment. Since this system is a recent addition, there is not an extensive surveillance history. There is no indication that this system is unreliable. Alternate methods are available to determine vessel level and any failure of this system is annunciated. The channel checks will continue to be performed on a monthly basis.

### (4) Auxiliary Feedwater Pump Testing

Testing of these items would require either plant shutdown or a trip of a main feedpump with the resultant reduction in plant power and associated thermal transient. Portions of the system have been inadvertently tested by spurious trips several times since the last refueling. Additionally, part of the surveillance was performed during a recent short duration outage. The licensee has noted in its submittal that these items have had an excellent test history. Though not specifically mentioned in the licensee's submittal, the staff notes that the required monthly surveillance will continue.

#### (5) Diesel Generator Testing

The surveillance requirements of T/S 4.8.1.1.2.C for diesel generators (DG) 2AB and 2CD are required by TS to be performed during shutdown. To perform the scope of work necessary to satisfy these surveillance requirements would require the diesel generators to be inoperable for an extended period of time or the plant to be shut down to prevent inadvertent trip. Therefore, the licensee has requested a one-time extension to perform these surveillance requirements during the upcoming outage. Surveillance requirements of 4.8.1.1.2.C.1 require subjecting each diesel generator to an inspection which is in accordance with procedures prepared in conjunction with the manufacturer's recommendations for this class of standby service. This surveillance interval requirement expires on March 18, 1988 for DG 2AB and April 18, 1988 for DG 2CD. The balance of surveillance requirements of T/S 4.8.1.1.2.C (4.8.1.1.2.C.2 thru 12) expire on May 16, 1988. The licensee is requesting this extension until approximately June 30, 1988, when they expect the entire core to be unloaded.

The licensee has verified with the diesel generator vendor that the DG inspection required by T/S 4.8.1.1.2.C.1 can be extended on a one-time basis for the requested period. The results from the periodic DG surveillance show that the individual performance of D. C. Cook DG's (2AB & 2CD) surpasses the industry average. Only one failure in the last 100 starts has occurred on DG 2CD and no failures have occurred on DG 2AB. Additionally, there have been no significant problems with the other surveillance requirements of T/S 4.8.1.1.2.C.2 thru 12 in the past. Based on the above, the staff concludes that the proposed extension to perform the surveillance requirements of T/S 4.8.1.1.2.C for the above period is acceptable.

The licensee also proposes to extend the surveillance period for testing the emergency power supply for the power operated relief valves (PORV's) and block valves (T.S. 4.4.11.3). This test assures that emergency power is available from the emergency diesel generators, therefore, the tests are done coincident with DG testing during refueling outages. The staff agrees that testing at power could readily induce a reactor trip which is unwarranted considering the short duration of the extension. These tests have been performed successfully in the past and there is no reason to believe the extension will change this performance. The extension is acceptable. The licensee further proposes to extend the testing of essential service water automatic valves, some of which provide cooling to the DG's. These tests have been successful in the past and are done in conjunction with the DG tests during refueling. Based on the performance history of these valves and use of procedures in conjunction with DG testing, the extensions of these surveillances are acceptable.

#### ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of the amendment will have no significant impact on the environment (52 FR 48470, December 22, 1987).

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, and (2) such activities will be conducted in compliance with the Commission's regulations, and 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: December 28, 1987