April 22, 2003

Mr. A. Christopher Bakken III, Senior Vice President
and Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS (TAC NOS. MB5695 AND MB5696)

Dear Mr. Bakken:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 275 to Facility Operating License No. DPR-58 and Amendment No. 257 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated July 23, 2002.

The amendments revise the TSs for certain 18-month surveillance requirements by eliminating the condition that testing be conducted “during shutdown,” or “during the COLD SHUTDOWN or REFUELING MODE” (i.e., shutdown conditions).

A copy of our related safety evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

John F. Stang, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures: 1. Amendment No. 275 to DPR-58
2. Amendment No. 257 to DPR-74
3. Safety Evaluation

cc w/encls: See next page

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DATE	04/22/03	04/21/03	04/21/03	04/21/03	04/22/03

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Donald C. Cook Nuclear Plant, Units 1 and 2

cc:

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INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 275
License No. DPR-58

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Indiana Michigan Power Company (the licensee) dated July 23, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 275, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 45 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

L. Raghavan, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: April 22, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 275

TO FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3/4 5-5	3/4 5-5
3/4 6-10	3/4 6-10
3/4 6-13	3/4 6-13
3/4 6-15	3/4 6-15
3/4 7-6	3/4 7-6
3/4 7-15	3/4 7-15
3/4 7-17	3/4 7-17

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 257
License No. DPR-74

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Indiana Michigan Power Company (the licensee) dated July 23, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 257, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 45 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

L. Raghavan, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: April 22, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 257

FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3/4 5-5	3/4 5-5
3/4 6-10	3/4 6-10
3/4 6-12	3/4 6-12
3/4 6-14	3/4 6-14
3/4 7-6	3/4 7-6
3/4 7-12	3/4 7-12
3/4 7-13	3/4 7-13

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 275 TO FACILITY OPERATING LICENSE NO. DPR-58

AND AMENDMENT NO. 257 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By application dated July 23, 2002, the Indiana Michigan Power Company (the licensee) requested amendments to the Technical Specifications (TSs) for the Donald C. Cook Nuclear Plant, Units 1 and 2. The proposed amendments would revise certain 18-month surveillance requirements (SRs) by eliminating the provisions that the testing be conducted "during shutdown," or "during the COLD SHUTDOWN or REFUELING MODE" (i.e., shutdown conditions). The proposed amendments would result in a substantial reduction in the number of components that must be tested during shutdown conditions.

Some surveillances that are currently required to be performed during shutdown are performed on systems that are most needed during shutdown. These surveillances are better performed during power operation. Thus, a reduction of the number of components that must be tested during shutdown will improve the availability of systems important for maintaining the plant in a safe shutdown condition. An example of such systems is the residual heat removal system.

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations* (CFR) Part 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," requires that the licensee assess and manage the increase in risk that may result from proposed maintenance activities prior to their performance. The intent of the current restriction in the D. C. Cook TSs to perform certain 18-month SRs during shutdown conditions is to ensure that the surveillance is performed consistent with safe plant operation. The licensee is proposing a license amendment that removes the requirement to perform certain surveillances during shutdown conditions, allowing use of the risk assessment program at D. C. Cook to determine whether the performance of these surveillance activities is consistent with safe plant operation.

The NRC staff reviewed the proposed changes to the TSs to ensure that they are consistent with similar surveillances described in the Standard Technical Specifications (STS) for Westinghouse plants (NUREG-1431, Revision 2) and previous generic guidance regarding specific conditions for performing SRs. In Generic Letter (GL) 91-04, "Changes to Technical Specification Surveillance Intervals to accommodate a 24-month Fuel Cycle," the NRC

described elimination of the shutdown condition from SRs. The intent of the restriction to perform surveillances "during shutdown" is to ensure the surveillance is performed consistent with safe plant operation. However, in GL 91-04, the NRC recognized that the consideration of safe plant operation is valid for other surveillances that are performed during operational modes other than shutdown, but is not addressed by restricting the conduct of these surveillances.

3.0 TECHNICAL EVALUATION

There are numerous surveillances that are required by the TSs to be performed during shutdown. Many of these surveillances involve complex plant configurations that can be both a burden to personnel and a safety risk. Some surveillances required during shutdown are redundant to surveillances required at power, and thus, are an unnecessary burden to personnel. If these surveillances can be safely performed at power, and allowing credit to be applied to surveillances required during shutdown, many redundant surveillances during shutdown would be eliminated without any adverse impact on plant safety. Tests that cannot be safely performed at power will, of course, continue to be performed during shutdown.

The requirement to perform certain surveillances only during shutdown is intended to ensure that these surveillances are performed consistent with safe plant operation. However, many components affected by such restrictions are designed such that they may also be safely tested at power. In addition, some affected components are routinely tested at power in accordance with other SRs. Thus, safe conduct of surveillances dictates that performance of the 18-month surveillance testing of pump starts and valve actuations during power operation should be performed during the allowed outage time on a single train such that the opposite train would be available to mitigate an accident.

In GL 91-04, the NRC staff specifically recommends the elimination of the condition "during shutdown" from SRs. It states:

> The staff concludes that the TSs need not restrict surveillances as only being performed during shutdown. Nevertheless, safety dictates that when refueling interval surveillances are performed during power operation, licensees give proper regard for their effect on the safe operation of the plant. If the performance of a refueling interval surveillance during plant operation would adversely affect safety, the licensee should postpone the surveillance until the unit is shutdown for refueling or is in a condition or mode that is consistent with the safe conduct of that surveillance.

The licensee's proposed changes are consistent with the STS in NUREG-1431 and GL 91-04.

Specifically, the licensee proposed the following changes to the TSs to remove the stipulation that the following surveillances can only be performed while the reactor is in Cold Shutdown, Refueling, or Shutdown:

1. TS 3/4.5.2, "ECCS Subsystems - Tavg $\geq$ 350°F," in SR 4.5.2.e -- delete the term "during shutdown"

2. TS 3/4.6.2.1, "Containment Spray System," in SR 4.6.2.1.c -- delete the term "during shutdown"

3. TS 3/4.6.2.2, “Spray Additive System,” in SR 4.6.2.2.c -- delete the term “during shutdown”

4. TS 3/4.6.3.1, “Containment Isolation Valves,” in SR 4.6.3.1.2 -- delete the term “during the COLD SHUTDOWN or REFUELING MODE”

5. TS 3/4.7.1.2, “Auxiliary Feedwater System,” in SRs 4.7.1.2.e, 4.7.1.2.f and 4.7.1.2.g -- delete the term “during shutdown”

6. TS 3/4.7.3.1, “Component Cooling Water System,” in SR 4.7.3.1.b and 4.7.3.1.d -- delete the term “during shutdown”

7. TS 3.7.4.1, “Essential Service Water System,” in SR 4.7.4.1.b – delete the term “during shutdown”

The proposed changes to specify that an actual or simulated signal is acceptable to meet the SRs will be deferred. The licensee is currently working on a license amendment request to adopt the improved STS and is planning to include this change when the amendment request is submitted for NRC staff review and approval.

Surveillances required by TSs 4.6.2.1.c, 4.6.2.2.c, 4.7.1.2.e and f, and 4.6.3.1.2 are surveillances of pumps and valves which actuate following the receipt of an engineered safety feature actuation system (ESFAS) signal. The surveillances assure that the pumps start and valves reposition correctly following the receipt of an ESFAS signal. The ESFAS is designed with sufficient redundancy to provide the capability for testing during power operation. The systems are actuated by redundant logic and coincidence networks similar to those used for reactor protection. Each network actuates a device that operates the associated engineered safety features equipment, motor starters, and valve operators. Separate logic circuits exist in each of the two trains of the ESFAS circuitry. Each output of the logic circuits consists of a master relay which drives slave relays for contact multiplication as required. Separate safeguards test cabinets provide the capability to check the circuitry from the slave relays to the final elements. By design, the impact of the slave relay tests on the plant is minimized due to the equipment assignments to each slave relay. Test procedures will be followed during the surveillances that will prevent the plant from being placed in an unsafe condition when the above surveillances are performed while a unit is at power. Therefore, the NRC staff finds that the above surveillance activities can be performed safely with the units in power operation.

Surveillances required by TS 4.5.2.e, 4.7.3.1.b, and 4.7.4.1.b are surveillances of pumps and valves following the receipt of a safety injection (SI) signal. The surveillance assures that pumps start and valves go to their correct position upon receipt of an SI signal. The SI system is designed with sufficient redundancy to provide the capability for testing during power operation. The systems are actuated by redundant logic and coincidence networks similar to those used for reactor protection. Each network actuates a device that operates the associated engineered safety features equipment, motor starters, and valve operators. Separate logic circuits exist in each of the two trains of the SI circuitry. Test procedures will be followed during the surveillances that will prevent the plant from being placed in an unsafe condition when the above surveillances are performed while a unit is at power. Therefore, the NRC staff finds the above surveillance activities can be performed safely with the units in power operation.

Surveillances required by TSs 4.7.1.2.g and 4.7.3.1.d are surveillances which require the crosstie valves in the auxiliary feedwater (AFW) and the component cooling water (CCW) system to be tested. The surveillances require the valves be verified to travel a full cycle. AFW and CCW crosstie valves are currently cycled with one unit in operation. Credit for performance of the respective surveillances can only be taken for the shutdown unit, thereby requiring an additional valve cycle when the other unit is shutdown. There is no adverse interaction with either unit for AFW crosstie valves since the AFW pumps would not be operating with the units at power. CCW crosstie valves would have no adverse interaction since each valve is cycled independent of the others such that there is one closed valve between each unit's CCW system at all times. Therefore, the NRC staff finds the above surveillance activities can be performed safely with the units in power operation.

The licensee assesses and manages risk per 10 CFR 50.65(a)(4) prior to performing maintenance and surveillance activities both online and offline. This risk management assessment provides insights regarding risk-significant activities to control overall risk impact. The requirements of 10 CFR 50.65(a)(4) have been implemented by the licensee in accordance with the guidelines of NUMARC 93-01, Revision 3, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." The objective of risk management as stated in NUMARC 93-01 is to control the temporary and aggregate risk increases from maintenance activities such that average baseline risk is maintained within a minimal range. This is accomplished by planning and scheduling maintenance such that the risk increases are limited, and to take additional actions beyond routine work controls to address situations where the temporary risk increase is above a certain threshold.

In summary, the licensee's proposed changes are consistent with the STS in NUREG-1431 and GL 91-04. The proposed changes will thereby result in a reduction of the risks associated with performing surveillances during shutdown, and will improve the availability of systems important to maintaining the plant in a safe shutdown condition. The performance of certain 18-month surveillance test during power operation must be evaluated for risk impact in accordance with 10 CFR 50.65 and performed only when it is safe to do so. Therefore, the NRC staff finds the licensee's proposed changes acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

These amendments change the requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or change the surveillance requirements. The staff has determined that the amendments involve 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 amendments involve no significant hazards consideration and there has been no public comment on such finding (67 FR 58647). Accordingly, the amendments meet 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 amendments.

6.0 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Stang

Date: April 22, 2003