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

November 30, 2000

Mr. Robert P. Powers, Senior Vice President
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. MB0292 AND MB0293)

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 250 to Facility Operating License No. DPR-58 and Amendment No. 231 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 in response to your application dated October 18, 2000, as supplemented November 10, 2000.

The amendments revise Technical Specifications (TSs) 3/4.7.1.2, "Auxiliary Feedwater (AFW) System," to change the description in the TSs surveillance requirement (SR) 4.7.1.2.d of the position for each automatic valve in the AFW system from the "fully open" position to the "correct" position.

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,

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. 250 to DPR-58
2. Amendment No. 231 to DPR-74
3. Safety Evaluation

cc w/encls: See next page

NRR-058

cc:

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UNITED STATES
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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. 250
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 October 18, 2000, as supplemented November 10, 2000, 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. 250 , 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 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Claudia M. Craig

Claudia M. Craig, 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: November 30, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 250

TO FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE	INSERT
3/4 7-6	3/4 7-6

SURVEILLANCE REQUIREMENTS (Continued)

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE when tested pursuant to Specification 4.0.5 by:

a. Verifying that each motor driven auxiliary feedwater pump's developed head at the test flow point is greater than or equal to the required developed head.

b. Verifying that the turbine driven auxiliary feedwater pump's developed head at the test flow point is greater than or equal to the required developed head. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.

c. Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position.

d. Verifying that each automatic valve in the flow path is in the correct position whenever the auxiliary feedwater system is placed in automatic control or when above 10% RATED THERMAL POWER. This requirement is not applicable for those portions of the auxiliary feedwater system being used intermittently to maintain steam generator water level.

e. Verifying at least once per 18 months during shutdown that each automatic valve in the flow path actuates to its correct position upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.

f. Verifying at least once per 18 months during shutdown that each auxiliary feedwater pump starts as designed automatically upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.

g. Verifying at least once per 18 months during shutdown that the unit cross-tie valves can cycle full travel. Following cycling, the valves will be verified to be in their closed positions.

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INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 231
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 October 18, 2000, as supplemented November 10, 2000, 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. 231 , 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 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Claudia M. Craig

Claudia M. Craig, 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: November 30, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 231

FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE	INSERT
3/4 7-6	3/4 7-6

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE when tested pursuant to Specification 4.0.5 by:

a. Verifying that each motor driven auxiliary feed pump's developed head at the test flow point is greater than or equal to the required developed head.

b. Verifying that the turbine driven auxiliary feedwater pump's developed head at the test flow point is greater than or equal to the required developed head. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.

c. Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position.

d. Verifying that each automatic valve in the flow path is in the correct position whenever the auxiliary feedwater system is placed in automatic control or when above 10% RATED THERMAL POWER. This requirement is not applicable for those portions of the auxiliary feedwater system being used intermittently to maintain steam generator level.

e. Verifying at least once per 18 months during shutdown that each automatic valve in the flow path actuates to its correct position upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.

f. Verifying at least once per 18 months during shutdown that each auxiliary feedwater pump starts as designed automatically upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.

g. Verifying at least once per 18 months during shutdown that the unit cross-tie valves can cycle full travel. Following cycling, the valves will be verified to be in their closed positions.

UNITED STATES
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 250 TO FACILITY OPERATING LICENSE NO. DPR-58

AND AMENDMENT NO. 231 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 October 18, 2000, as supplemented November 10, 2000, 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 TSs 3/4.7.1.2, "Auxiliary Feedwater (AFW) System," to change the description in the TSs surveillance requirement (SR) 4.7.1.2.d of the position for each automatic valve in the AFW system from the "fully open" position to the "correct" position.

The supplemental information contained in the November 10, 2000, letter provided clarifying information only and did not change the initial no significant hazards consideration determination and did not expand the scope of the original *Federal Register* notice.

2.0 BACKGROUND

The AFW system automatically supplies feedwater to the steam generators (SGs) to remove decay heat from the reactor coolant system (RCS) upon the loss of normal feedwater supply. The AFW pumps take suction through separate and independent suction lines from the condensate storage tank (CST) and pump to the SG secondary side via separate and independent connections to the main feedwater (MFW) piping outside containment. The SGs function as a heat sink for core decay heat. The heat load is dissipated by releasing steam to the atmosphere from the SGs via main steam safety valves (MSSVs) or atmospheric dump valves (ADVs).

The AFW system mitigates the consequences of any event with a loss of normal feedwater. The design basis of the AFW system is to supply water to the SG to remove decay heat and other residual heat by delivering at least the minimum required flow rate to the SGs at pressures corresponding to the lowest MSSV set pressure plus 3 percent.

3.0 EVALUATION

During reviews of industry operating experience performed as part of the licensee's expanded system readiness review, a concern for steam generator (SG) overfill following a SG tube

Rupture (SGTR) was identified. The licensee discovered the potential for the fully open automatic valves in the AFW flowpath to result in a SG overfill condition following a SGTR. A SG overfill condition is a concern for the main steamline supports not being adequate to support the main steamline filled with water. The licensee has proposed a solution to change the AFW system valve configuration to specify an intermediate or "correct" position for certain automatic valves in the flowpath.

By application dated October 28, 2000, as supplemented November 10, 2000, the licensee requested amendments to the TSs for the Donald C. Cook Nuclear Plant, Units 1 and 2. The proposed amendments would revise TSs 3/4.7.1.2, "AFW System," to change the description in the TSs SR 4.7.1.2.d of the position for each automatic valve in the AFW system from the "fully open" position to the "correct" position.

The licensee has proposed to change the description in the TSs SR 4.7.1.2.d of the position for each automatic valve in the AFW system from the "fully open" position to the "correct" position. The licensee stated that the intermediate or "correct" position would continue to meet all other AFW design objectives and accident analysis assumptions.

The staff review of the application dated October 18, 2000, raised concerns that the AFW flow requirements would not be met for all the Updated Final Safety Analysis Report (UFSAR) Chapter 14 accident analyses. In addition, the staff raised concerns about the absence of a SR to verify the AFW automatic valves are in the "correct" position. The staff issued a Request for Additional Information (RAI) letter to the licensee on October 27, 2000, to address these concerns.

The licensee stated in their RAI response, dated November 10, 2000, that the frequency for SR 4.7.1.2.d will be 31 days. Based on the staff's question, the licensee realized that the existing SR reference to TS 4.0.5 does not provide a frequency for SR 4.7.1.2.c or SR 4.7.1.2.d. The licensee inadvertently deleted a 31-day requirement for these TS SRs in a license amendment request dated August 7, 1990. The request was subsequently issued as Amendments 164 and 149 on April 22, 1992. NUREG-1431, "Standard Technical Specifications Westinghouse Plants," recommends a surveillance frequency for automatic AFW valves of 31 days to ensure the automatic valves are in the correct position. The licensee will maintain administrative controls implementing the 31-day frequency for TS SRs 4.7.1.2.c and 4.7.1.2.d similar to the SR in NUREG-1431. In the November 10, 2000, letter, the licensee committed to submit a license amendment request to restore the 31-day frequency for TS SRs 4.7.1.2.c and 4.7.1.2.d by June 30, 2001. The staff finds this acceptable.

Also, the licensee stated in their RAI response, dated November 10, 2000, that the AFW system flow requirements will be met for all UFSAR accident analyses with the certain automatic valves in the AFW flowpath being changed from the "fully open" to the "correct" position. The licensee stated that the AFW system is designed to provide sufficient make-up to the SGs when the main feedwater supply is not available under the following accident scenarios: loss of main feedwater, station blackout, rupture of a main feedline, and a rupture of a main steamline. The currently required AFW flowrates were determined for each of the above scenarios. In addition, the licensee stated that the "current" initial position of AFW system valves in the flowpath is the "fully open" position, which is based upon the UFSAR Chapter 14 safety analyses. The response to the RAI indicated that, by changing the AFW automatic valves to the "correct" position, adequate AFW flows maintained by the AFW

automatic valves meet all Chapter 14 accidents under worst case conditions taking in consideration all uncertainties.

The licensee's proposed SR 4.7.1.2.d change for the position for each automatic valve in the AFW system from the "fully open" position to the "correct" position is consistent with the recommendation of NUREG-1431 SR for automatic valves in the AFW flowpath. In addition, the licensee's proposed SR 4.7.1.2.d frequency is consistent with the recommendation of NUREG-1431 for automatic valves in the AFW flowpath. Therefore, the NRC staff finds the proposed TSs SR 4.7.1.2.d change acceptable based on the consistency with NUREG-1431 recommendations and the reanalysis performed by the licensee.

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 (65 FR 63899). 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: John G. Lamb

Date: November 30, 2000