

December 10, 1998

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 RE: TURBINE DRIVEN AUXILIARY FEEDWATER PUMP
SURVEILLANCE TEST REQUIREMENTS (TAC NOS. M99492 AND M99493)

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 225 to Facility Operating License No. DPR-58 and Amendment No. 209 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 August 1, 1997 (AEP:NRC:0906H).

The amendments delete a portion of the TS 4.7.1.2 surveillance test requirements that specify that the steam driven auxiliary feedwater pumps be tested "when the secondary steam supply pressure is greater than 310 psig." This removes any misunderstanding that the secondary steam pressure must be just above 310 psig for this test. We have determined that the objective of the surveillance requirement is met with any secondary steam supply pressure that enables the appropriate pump speed to be obtained.

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

Sincerely,

ORIGINAL SIGNED BY

John F. Stang, Sr. Project Manager
Project Directorate III-4
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures: 1. Amendment No. 225 to DPR-58
2. Amendment No. 209 to DPR-74
3. Safety Evaluation

cc w/encls: See next page

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ORIGINAL SIGNED BY

John F. Stang, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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

December 10, 1998

Mr. Robert P. Powers, Senior Vice President
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
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SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF
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Sincerely,

A handwritten signature in black ink, appearing to read "John F. Stang", is written over the typed name.

John F. Stang, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures: 1. Amendment No.225 to DPR-58
2. Amendment No.209 to DPR-74
3. Safety Evaluation

cc w/encls: See next page

DATED: December 10, 1998

AMENDMENT NO. 225 TO FACILITY OPERATING LICENSE NO. DPR-58, DONALD C. COOK
NUCLEAR PLANT, UNIT 1

AMENDMENT NO. 209 TO FACILITY OPERATING LICENSE NO. DPR-74, DONALD C. COOK
NUCLEAR PLANT, UNIT 2

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Robert P. Powers
Indiana Michigan Power Company

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Donald C. Cook Nuclear Plant
Units 1 and 2

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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 225
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 August 1, 1997, 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.

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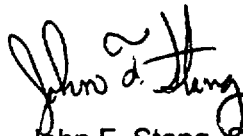
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 225, 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 the date of issuance, with full implementation within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stang, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Change to the Technical
Specifications

Date of Issuance: December 10, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 225

TO FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Revise Appendix A Technical Specifications by removing the page identified below and inserting the attached page. The revised page is identified by amendment number and contains a vertical line indicating the area of change.

REMOVE

INSERT

Page 3/4 7-6

Page 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 fully open 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.



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 209
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 August 1, 1997, 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.

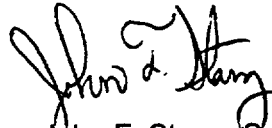
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 209, 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 the date of issuance, with full implementation within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stang, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Change to the Technical
Specifications

Date of Issuance: December 10, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 209

FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached page. The revised page is identified by amendment number and contains a vertical line indicating the area of change.

REMOVE

INSERT

Page 3/4 7-6

Page 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 fully open 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
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

**SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 225 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 209 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 letter dated August 1, 1997, the Indiana Michigan Power Company (the licensee) requested amendments to the Technical Specifications (TS) appended to Facility Operating License Nos. DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant, Units 1 and 2. The proposed amendments would delete a portion of the TS 4.7.1.2 surveillance test requirements which specifies that the steam driven auxiliary feedwater pumps be tested "when the secondary steam supply pressure is greater than 310 psig." This would remove any misunderstanding, such as that discussed in Inspection Report 50-315/316-97004, that the secondary steam pressure must be just above 310 psig for this test.

TS Bases would not be affected by the proposed amendment.

2.0 DISCUSSION AND EVALUATION

2.1 Auxiliary Feed Water System Description and Design

Each of the two D. C. Cook units has three auxiliary feedwater (AFW) pumps; two motor-driven pumps (MDAFW pumps) and one steam turbine driven (TDAFW) pump. Each MDAFW pump serves two steam generators and has crossconnect capability to serve two steam generators in the other unit. Each TDAFW pump can serve four steam generators, but only those four in its respective unit. Each of the MDAFW pumps has a rated capacity of 450 gpm. Each TDAFW pump has a rated capacity of 900 gpm. The AFW System is designed to provide make-up feedwater to the steam generators when the main feedwater supply is not available, particularly under the following scenarios: loss of main feedwater, station blackout, cooldown, rupture of main feedline and rupture of main steamline (Ref: USAR 10.5.2.3).

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2.2 AFW System Test Requirement:

To assure AFW system operability during conditions when steam generators may be needed for decay heat removal and cooldown, technical specifications (TS) identify (a) two minimum conditions for operability, and (b) seven surveillance test requirements. One of the seven surveillance test requirements (i.e., 4.7.1.2.b), requires verification, pursuant to ASME Section XI, code requirements, "that the TDAFW pump's developed head at the test flow point is greater than or equal to the required developed head when the secondary supply pressure is greater than 310 psig." The basis for the 310 psig parameter is not explained in the TS Bases or USAR. It is a logical assumption that it relates to the fact that the AFW system may be required to cool down the steam generators to shutdown cooling conditions when steam supply pressure is low. The "310 psig" parameter was not included in the original October 25, 1974 Unit 1 TS, but was included in the original December 23, 1977 TS for Unit 2.

2.3 Consistency of DC Cook TDAFW Pump Flow Test Requirement with Standard Requirements

NUREG-1431 "WOG Standard Technical Specifications" (ISTS) requires that each AFW pump be tested to verify the developed head at the flow test point, and that for the TDAFW pump, the test is not required to be performed until 24 hours after reaching or exceeding 1000 psig in the steam generator. The ISTS thus permits the TDAFW test to be delayed until high pressure steam supply is available. Also, the ASME Code for inservice testing of pumps requires that a variable speed pump be adjusted to a reference speed as a prerequisite for testing. The steam supply pressure is adjusted as necessary to obtain the reference pump speed.

2.4 Acceptability of Licensee's Proposed TS Change

The licensee's proposed change is consistent with the staff and WOG position that the TDAFW flow test be performed during conditions when steam supply pressure is relatively high. The licensee's proposal to delete the minimum steam supply pressure requirement of 310 psig will clarify the understanding that considerably higher steam supply pressure is acceptable.

The capability of the AFW System to provide makeup water to steam generators under conditions for which a MDAFW pump might not be available (i.e., station blackout) or any other design basis event, would not be affected by the proposed amendment.

The proposed amendment does not involve a change to the design basis of either facility, and would not adversely affect capability of the AFW Systems to support the decay heat removal capability provided by the steam generators. The proposed change would in no way modify ASME Section XI test conditions and requirements which are intended to identify and measure pump degradation. The proposed change is therefore acceptable.

3.0 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.

4.0 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 (62FR68308). 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.

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

Principal Contributor: W. Long

Date: December 10, 1998