

January 11, 2008

Mr. Michael W. Rencheck
Senior Vice President and
Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 (DCCNP-1 AND -2) -
ISSUANCE OF AMENDMENT REGARDING OPERATIONAL TEST OF THE
REACTOR TRIP ON TURBINE TRIP (TAC NOS. MD5613 AND MD5614)

Dear Mr. Rencheck:

The Commission has issued the enclosed Amendment Nos. 301 and 284 to Renewed Facility Operating License Nos. DPR-58 (for DCCNP-1) and DPR-74 (for DCCNP-2). The amendments consist of changes to the technical specifications (TSs) in response to your application dated May 11, 2007.

The amendments revise the DCCNP-1 and DCCNP-2 TSs to increase the power level at which performance of the trip actuating device operational test (TADOT) of a reactor trip following a turbine trip signal is required. Specifically, the previous Surveillance Requirement 3.3.1.18 requires performance of a TADOT of a reactor trip on turbine trip prior to exceeding the P-7 interlock (at approximately 10 percent of the rated thermal power (RTP)) whenever the unit has been in Mode 3, if not performed within the previous 31 days. The amendments replaced the "P-7" interlock with the "P-8" interlock (at approximately 31 percent RTP).

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

Sincerely,

/RA/

Peter S. Tam, Senior Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures:

1. Amendment Nos. 301 and 284
2. Safety Evaluation

cc w/encls: See next page

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 Senior Vice President and
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INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 301
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 May 11, 2007, 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 Renewed Facility Operating License No. DPR-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and Appendix B, as revised through Amendment No. 301 are hereby incorporated in the renewed operating 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 issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA J. Cushing for/

Clifford G. Munson, Acting Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Renewed Operating License
and Appendix A

Date of Issuance: January 11, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 301

RENEWED FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Replace the following page of Renewed Facility Operating License No. DPR-58 with the attached revised page. The change area is identified by a marginal line.

REMOVE

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Replace the following page of Appendix A, Technical Specifications, with the attached revised page. The change area is identified by a marginal line.

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3.3.1-10

and radiation monitoring equipment calibration, and as fission detectors in amounts as required.

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not to exceed 3304 megawatts thermal in accordance with the conditions specified therein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A and Appendix B, as revised through Amendment No. 301, are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Less Than Four Loop Operation

The licensee shall not operate the reactor at power levels above P-7 (as defined in Table 3.3.1-1 of Specification 3.3.1 of Appendix A to this renewed operating license) with less than four reactor coolant loops in operation until (a) safety analyses for less than four loop operation have been submitted, and (b) approval for less than found loop operation at power levels above P-7 has been granted by the Commission by amendment of this license.

- (4) Indiana Michigan Power Company shall implement and maintain, in effect, all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report for the facility and as approved in the SERs dated December 12, 1977, July 31, 1979, January 10, 1981, February 7, 1983, November 22, 1983, December 23, 1983, March 16, 1984, August 27, 1985

Renewed License No. DPR-58
Amendment No. ~~4 through 300~~, 301

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 284
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 May 11, 2007, 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 Renewed Facility Operating License No. DPR-74 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and Appendix B, as revised through Amendment No. 284, are hereby incorporated in the renewed operating 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 issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA J. Cushing for/

Clifford G. Munson, Acting Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Renewed Operating License
and Appendix A

Date of Issuance: January 11, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 284

RENEWED FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Replace the following page of Renewed Facility Operating License No. DPR-74 with the attached revised page. The change area is identified by a marginal line.

REMOVE

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Replace the following page of Appendix A, Technical Specifications, with the attached revised page. The change area is identified by a marginal line.

REMOVE

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3.3.1-10

radiation monitoring equipment calibration, and as fission detectors in amounts as required.

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components; and
- (5) Pursuant to the Act and 10 CFR 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Section 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not to exceed 3468 megawatts thermal in accordance with the conditions specified therein and in attachment 1 to the renewed operating license. The preoperational tests, startup and other items identified in Attachment 1 to this renewed operating license shall be completed. Attachment 1 is an integral part of this renewed operating license.

(2) Technical Specifications

The Technical Specifications contained in Appendix A and Appendix B, as revised through Amendment No. 284, are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Additional Conditions

- (a) Deleted by Amendment No. 76
- (b) Deleted by Amendment No. 2
- (c) Leak Testing of Emergency Core cooling System Valves

Indiana Michigan Power Company shall prior to completion of the first inservice testing interval test each of the two valves in series in the

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
AMENDMENT NO. 301 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-58
AMENDMENT NO. 284 TO RENEWED 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 to the U.S. Nuclear Regulatory Commission (NRC, Commission) dated May 11, 2007 (Accession No. ML071420071), Indiana Michigan Power Company (I&M, the licensee), proposed a change to the Technical Specifications (TS) for Donald C. Cook Nuclear Plant, Units 1 and 2. The change would increase the power level at which performance of the trip actuating device operational test (TADOT) of turbine trip functions is required. Specifically, the current Surveillance Requirement (SR) 3.3.1.18 requires performance of a TADOT of turbine trip functions prior to exceeding the P-7 interlock (at approximately 10 percent of the rated thermal power (RTP)) whenever the unit has been in Mode 3, if not performed within the previous 31 days. The proposed TS would replace the "P-7" interlock with the "P-8" interlock (at approximately 31 percent RTP).

The licensee's proposed TS change is intended to remove the gap between the required surveillance performance and the applicability specified in TS Table 3.3.1-1 for the reactor trip on a turbine trip function.

2.0 REGULATORY EVALUATION

The NRC staff stated in the Three Mile Island (TMI) Action Item II.K.3.10 of NUREG-0737 that "the anticipatory trip modification proposed by some licensees to confine the range of use to high-power levels should not be made until it has been shown on a plant-by-plant basis that the probability of a small-break loss-of-coolant accident (LOCA) resulting from a stuck-open power operated relief valve (PORV) is substantially unaffected by the modification."

The NRC regulatory requirements related to the content of the TS are set forth in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36, "Technical Specifications." Specifically, Section 10 CFR 50.36(d)(3) requires TSs to include SRs relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that the facility operation will be within safety limits, and that the limiting conditions for operation will be met. NUREG-1431, "Standard Technical Specifications - Westinghouse Plants," provides guidance for implementing TS requirements specified in 10 CFR 50.36. The NRC staff's evaluation of the licensee's proposed TS changes is to assure compliance with the guidance

of TMI Action Item II.K.3.10. The NRC staff will use the NUREG-1431 guidance to assess compliance of the proposed TS with the requirements of 10 CFR 50.36.

3.0 TECHNICAL EVALUATION

3.1 The Results of Applicable Safety Analyses

The turbine trip function specified as Item 16 in the DCCNP-1 and DCCNP-2 TS Table 3.3.1-1 is designed to minimize the temperature and pressure transient on the reactor. The TS requires a reactor trip when a turbine trip signal occurs and the reactor power is equal to or greater than an interlock setpoint. It also requires that automatic reactor trips on turbine trips be blocked when the reactor power decreases below the interlock setpoint. Formerly, DCCNP-1 and DCCNP-2 TS specified the interlock setpoint for the reactor trip following a turbine trip signal at the P-7 setpoint (i.e., at approximately 10 percent RTP). In March 2006, the licensee proposed to increase the interlock setpoint from P-7 to the P-8 (i.e., approximately 31 percent RTP); the NRC staff approved this change by Amendment No. 297 and 278 for DCCNP-1 and DCCNP-2, respectively, on October 30, 2006. The NRC staff's approval was based on the following reasons:

(1) The proposed changes did not affect the results of the safety analyses for applicable events including those discussed in Chapter 14 of the Updated Final Safety Analysis Report:

- Uncontrolled Rod Cluster Control (RCCA) Assembly Bank Withdrawal from a Subcritical Condition;
- Uncontrolled RCCA Bank Withdrawal at Power;
- RCCA Misalignment;
- Chemical and Volume Control System Malfunction;
- Loss of Reactor Coolant Flow;
- Startup of Inactive Reactor Coolant Loop;
- Loss of External Electrical Load (from full power);
- Loss of Normal Feedwater Flow;
- Excessive Heat Removal Due to Feedwater System Malfunctions
- Excessive Load Increase Incident;
- Loss of All Alternating Current Power to the Plant Auxiliaries;
- Steam Generator Tube Rupture;
- Rupture of a Steam Pipe;
- Rupture of an RCCA Housing (RCCA Ejection);
- Major Rupture of Main Feedwater Pipe (DCCNP-2 only);
- LOCA and LOCA-Related Analyses,
- Containment Integrity Evaluation (Short term & Long term); and
- Main Steamline Break Mass and Energy Release Analyses.

(2) The proposed changes met the guidance of TMI Action Item II.K.3.10 in NUREG-0737.

In the safety evaluation supporting Amendment No. 297 and 278 for DCCNP-1 and DCCNP-2, the NRC staff indicated that the licensee's analysis showed that with the proposed TS changes, the reactor pressure increase caused by the load rejection

or turbine trip would not be high enough to cause any of the PORVs to open. Therefore, the probability of a small-break LOCA resulting from a stuck-open PORV was considered to be not affected by the proposed modification, and thus, the proposed TS changes met the guidance of TMI Action Item II.K.3.10 in NUREG-0737.

3.2 The Licensee's Proposed TS Changes

The current SR 3.3.1.18 requires performance of a TADOT of turbine trip functions prior to exceeding the P-7 interlock whenever the unit has been in Mode 3, if not performed within the previous 31 days. The proposed TS would replace the "P-7" interlock with the "P-8" interlock in this SR. This TS change is intended to make the SR frequency of the TADOT align with the applicability specified in TS Table 3.3.1-1 for Item 16, "Turbine Trip."

The mode of applicability for Item 16 is "Mode 1, above the P-8 interlock." The current SR 3.3.1.18 frequency requires the performance of a TADOT prior to exceeding the P-7 interlock. The proposed SR 3.3.1.18 frequency would require performance of a TADOT prior to exceeding the P-8 interlock. Since the mode of applicability for Item 16 is "Mode 1, above the P-8 interlock," the proposed frequency for SR 3.3.1.18, "Prior to exceeding the P-8 interlock whenever the unit has been in Mode 3, if not performed within the previous 31 days," would ensure that the SR 3.3.1.18 surveillance is performed prior to the entrance into the mode of applicability for Item 16.

Also, the NRC staff's guidance in NUREG-1431, "Standard Technical Specifications – Westinghouse Plants," describes implementation of TS requirements specified in 10 CFR 50.36 for Westinghouse plants. SR 3.3.1.15 of NUREG-1431 requires performance of a TADOT of turbine trip functions to be performed "prior to exceeding the [P-9] interlock whenever the unit has been in MODE 3..." The "P-9" in the bracket is a plant-specific interlock setpoint for a reactor trip on a turbine trip signal and is consistent with that specified in note (h) for Item 16, "Turbine Trip," of DCCNP-1 and DCCNP-2 TS Table 3.3.1-1. As clarified on page B.3.3.1-25 of NUREG-1431 (Revision 3), any turbine trip from a power level below the P-9 setpoint will not actuate a reactor trip. In comparing the DCCNP TS with NUREG-1431, the "P-8" setpoint in the proposed TS is equivalent to the "P-9" setpoint in NUREG-1431. Therefore, the NRC staff determines that the proposed TS is consistent with SR 3.3.1.15 of NUREG-1431. In addition, similar TS changes were previously approved by the NRC for other Westinghouse plants such as North Anna Units 1 and 2.

3.3 Summary of NRC Staff Evaluation

Based on its review discussed in Sections 3.1 and 3.2 above, the NRC staff finds the licensee's proposed amendment 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

The amendments change a requirement 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 NRC 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 (72 FR 33783). 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 Commission 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: S. Sun and B. Marcus

Date: January 11, 2008

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