

August 3, 2001

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. MA9839 AND MA9840)

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 253 to Facility Operating License No. DPR-58 and Amendment No. 235 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 18, 2000.

The amendments would change Technical Specification (TS) 3/4.7.4, "Essential Service Water (ESW) System," and the associated Bases to add requirements that would support cross-connection to the opposite unit. The proposed amendment would also delete a provision for a 60-day allowed outage time when an ESW flowpath is not available to support the opposite unit's shutdown functions. Administrative and editorial changes are also made to provide consistency between units, correct typographical errors, improve readability, and improve page layout.

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. 253 to DPR-58
2. Amendment No. 235 to DPR-74
3. Safety Evaluation

cc w/encls: See next page

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OFFICIAL RECORD COPY

Donald C. Cook Nuclear Plant, Units 1 and 2

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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. 253

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 18, 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. 253, 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Darl S. Hood for/

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: August 3, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 253

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

3/4 7-17

B 3/4 7-4

INSERT

3/4 7-17

B 3/4 7-4

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 235
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 18, 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. 235, 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Darl S. Hood for/

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: August 3, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 235

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

3/4 7-13

B 3/4 7-4

INSERT

3/4 7-13

B 3/4 7-4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 253 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 235 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 August 18, 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 change Technical Specification (TS) 3/4.7.4, "Essential Service Water (ESW) System," and the associated Bases to add requirements that would support cross-connection to the opposite unit. The proposed amendment would also delete a provision for a 60-day allowed outage time when an ESW flowpath is not available to support the opposite unit's shutdown functions following a fire. Administrative and editorial changes are also made to provide consistency between units, correct typographical errors, improve readability, and improve page layout.

2.0 EVALUATION

The ESW system at D. C. Cook consists of a total of four pumps (two per unit). The system has two headers connected between units with crosstie valves. Each unit contains two independent ESW loops. Each pump can provide 100 percent of the required ESW system flow for one unit as stated in the Updated Final Safety Analysis Report (UFSAR). Credit is not taken in the UFSAR for the opposite unit's pumps in meeting the TS Limiting Condition for Operation (LCO) or single-failure criteria.

The current TSs require that two independent ESW loops in each unit be operable to ensure that the ESW requirements for accident mitigation in an operating unit, including single-failure considerations, will be met taking credit for only the ESW pumps associated with the operating unit. The TSs also require that an available ESW flowpath be maintained in each unit whenever the opposite unit is in Modes 1-4. This requirement was initially established to satisfy 10 CFR Part 50, Appendix R safe shutdown considerations for the opposite unit, and was later credited for resolving the concerns identified in GL 91-13, "Request for Information Related to the Resolution of Generic Issue 130, 'Essential Service Water System Failures at Multi-Unit Sites,' Pursuant to 10 CFR 50.54(f)."

During a review of the ESW system, the licensee discovered that an operable ESW loop may be adversely affected by inoperability of an opposite unit ESW pump sharing the same header. With open crosstie valves on the header, an inoperable pump can permit flow to be diverted from the operable ESW pump to the loads on the opposite unit. Flow diversion could be safety significant when the operable pump is supplying accident loads during the containment sump recirculation phase of accident mitigation concurrently with operation of the containment spray system (CTS). Under these accident conditions, the amount of ESW flow required for the CTS heat exchanger and other accident loads in the accident unit, combined with the flow diverted to cooling loads in the non-accident unit, would exceed the capacity of a single ESW pump. The licensee confirmed that T/S 3.7.4.1 is deficient in that it does not preclude the system alignment that would result in loss of flow. The deficiency can be eliminated by requiring at least one crosstie valve to be closed whenever an ESW pump on a header is not operable and the opposite unit is in Modes 1-4.

In accordance with the guidance in Administrative Letter 98-10, "Dispositioning of Technical Specifications that are Insufficient to Assure Plant Safety," the licensee implemented administrative controls as a compensatory measure for the nonconservative TS requirements to assure that the ESW system crosstie valves are properly positioned to prevent the diversion of ESW flow. Although these controls are appropriate as a short term action, a timely license amendment request is required for the permanent resolution. On August 18, 2000, the licensee proposed a license amendment as the resolution for the nonconservative TS. The licensee proposes to revise the applicability for TS 3.7.4.1.a. so that two ESW loops are also required to be operable when the opposite unit is Modes 1, 2, 3, and 4. In addition, the licensee proposes to add a new action statement to address crosstie valve closure when two ESW pumps on one unit are not maintained operable when the opposite unit is in Modes 1-4. For clarity, the action statements are presented on the basis of which unit is in Modes 1-4, rather than the current criteria of "When Specification 3.7.4.1.a. is applicable:" or "When Specification 3.7.4.1.b. is applicable:" The proposed action statement specifies that when the LCO is not met for the opposite unit, at least one crosstie valve must be closed within one hour or action a. of Specification 3.7.4.1 must be entered for the opposite unit's ESW pump (sharing the same header with the inoperable ESW pump). The staff finds the proposed changes eliminate the non-conservatism in the current TS and therefore find the changes acceptable.

The proposed amendment also adds a new Surveillance Requirement to ensure that a closed crosstie valve in the shutdown flowpath for the opposite unit can be opened from the control room. Changes are proposed to the Bases for this section of the TS to clarify the relationship between ESW headers and ESW loops and describe the potential for ESW pump flow diversion that is precluded by the new requirements for ESW pump operability. The impact of a closed crosstie valve on the alternate shutdown flowpath is also described in the Bases to ensure the impact is understood. The proposed change to the TS will assure that the appropriate crosstie valve is closed when necessary to isolate an operable ESW pump from an inoperable ESW pump in the opposite unit to preclude the diversion of ESW flow under accident conditions. In addition, the proposed TSs assure that the single-failure design of the ESW system is preserved. The proposed change to the Surveillance section of TS 3.7.4.1 will require that the crosstie valves can be opened and shut from the control room providing assurance that the flowpath can be restored when needed. Accordingly, the staff finds the proposed TSs are acceptable. In addition, the staff has no objection to the proposed bases changes.

The crosstie capability of the ESW system also has provided the licensee flexibility with compliance with 10 CFR Part 50 Appendix R. The licensee has chosen to use the ESW system from the opposite unit if a fire in a unit destroys the capability of both loops of the ESW system. The current TS allows up to 60 days for an inoperable Appendix R ESW flow path. To assure better availability of the Appendix R ESW system flow path between units, the proposed amendment changes the allowed outage time from 60 days to 7 days. The staff finds this proposed change makes the TSs more conservative and is therefore acceptable.

With respect to LCO 3.7.4.1.b, the TS Bases are revised to allow the available flow path to have closed cross-tie valve(s) when required by Action b.1. Based on discussions with the licensee on July 10, 2001, it is the staff's understanding that the ESW cross-tie valves are readily accessible for all postulated fire scenarios that rely upon ESW from the other unit. Therefore, it is reasonable to assume that local manual operation of the cross-tie valves is possible as reflected in the TS Bases. Therefore, the proposed change is acceptable.

The licensee proposes to make the following administrative and editorial changes to the TSs:

For both units the Bases for T/S 3/4.7.4 are revised to delete the words "...conditions within acceptable limits." and substitute the word "...analyses."

For Unit 2 only, a surveillance requirement is added to TS 3/4.7.4 to verify pump performance in accordance with T/S 4.0.5 is added. This makes Unit 2 consistent with Unit 1.

For Unit 1 T/S page 3/4 7-17 and Bases page B 3/4 7-4, and for Unit 2 Bases page B 3/4 7-4, format revisions are made to include appropriate headers and footers.

For Unit 1 only, the missing word "to" is added to the Action for T/S 3.7.4.1.b.

For Unit 1 only, a typographical error in the word "single" is corrected in the Bases for T/S 3/4.7.4.

The proposed editorial and administrative changes do not change any current TS requirements. The administrative and editorial changes are also made to provide consistency between units, correct typographical errors, improve readability, and improve page layout. Therefore, the staff finds the proposed changes 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 (65 FR 56951). 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: J. Stang

Date: August 3, 2001