

Template NRR-058

March 1, 2000

Mr. Robert P. Powers, Senior Vice President
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

SUBJECT: ISSUANCE OF AMENDMENTS - DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 (TAC NOS. MA7756 AND MA7757)

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 241 to Facility Operating License No. DPR-58 and Amendment No. 222 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 December 22, 1999.

The amendments delete Technical Specification (TS) 5.4.2, "Reactor Coolant System Volume," regarding the reactor coolant system (RCS) volume information. This information is not required to be in the TS for compliance with 10 CFR 50.36(c)(4). Information concerning the RCS volume is included in the D. C. Cook Updated Final Safety Analyses Report (UFSAR), and any changes to the information are controlled in accordance with 10 CFR 50.59.

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. 241 to DPR-58
- 2. Amendment No. 222 to DPR-74
- 3. Safety Evaluation

cc w/encls: See next page

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DATE	3/1/00		3/1/00		2/10/00	2/13/00	3/1/00	

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

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Docket Nos. 50-315 and 50-316

Enclosures: 1. Amendment No. 241 to DPR-58
2. Amendment No. 222 to DPR-74
3. Safety Evaluation

cc w/encls: See next page

Donald C. Cook Nuclear Plant, Units 1 and 2

cc:

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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. 241
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 December 22, 1999, 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.

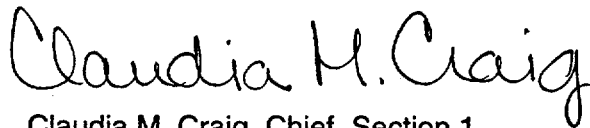
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 241, 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. In addition, the licensee shall include the relocated information to the Updated Final Safety Analysis Report as described in the licensee's application dated December 22, 1999, and evaluated in the staff's safety evaluation dated March 1, 2000.

FOR THE NUCLEAR REGULATORY COMMISSION



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: March 1, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 241

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 marginal lines indicating the areas of change.

REMOVE

5-5

INSERT

5-5

5.0 DESIGN FEATURES

5.4 REACTOR COOLANT SYSTEM

DESIGN PRESSURE AND TEMPERATURE

- 5.4.1 The reactor coolant system is designed and shall be maintained:
- a. In accordance with the code requirements specified in Section 4.1.6 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,
 - b. For a pressure of 2485 psig, and
 - c. For a temperature of 650°F, except for the pressurizer which is 680°F.

5.5 EMERGENCY CORE COOLING SYSTEMS

- 5.5.1 The emergency core cooling systems are designed and shall be maintained in accordance with the original design provisions contained in Section 6.2 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements, with one exception. This exception is the CVCS boron makeup system and the BIT.

5.6 FUEL STORAGE

CRITICALITY – SPENT FUEL

- 5.6.1.1 The spent fuel storage racks are designed and shall be maintained with:
- a. A k_{eff} equivalent to less than 0.95 when flooded with unborated water.
 - b. A nominal 8.97 inch center-to-center distance between fuel assemblies placed in the storage racks.
 - c. The fuel assemblies will be classified as acceptable for Region 1, Region 2, or Region 3 storage based upon their assembly average burnup versus initial nominal enrichment. Cells acceptable for Region 1, Region 2, and Region 3 assembly storage are indicated in Figures 5.6-1 and 5.6-2. Assemblies that are acceptable for storage in Region 1, Region 2, and Region 3 must meet the design criteria that define the regions as follows:



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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. 222
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 December 22, 1999, 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.

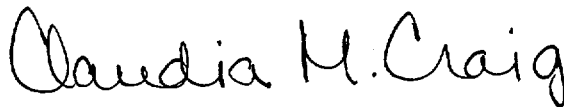
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 222, 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. In addition, the licensee shall include the relocated information to the Updated Final Safety Analysis Report as described in the licensee's application dated December 22, 1999, and evaluated in the staff's safety evaluation dated March 1, 2000.

FOR THE NUCLEAR REGULATORY COMMISSION



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: March 1, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 222

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 marginal lines indicating the areas of change.

REMOVE

5-5

INSERT

5-5

5.0 DESIGN FEATURES

5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-3.

5.6 FUEL STORAGE

CRITICALITY – SPENT FUEL

5.6.1.1 The spent fuel storage racks are designed and shall be maintained with:

- a. A K_{eff} equivalent to less than 0.95 when flooded with unborated water,
- b. A nominal 8.97-inch center-to-center distance between fuel assemblies, placed in the storage racks.
- c. The fuel assemblies will be classified as acceptable for Region 1, Region 2, or Region 3 storage based upon their assembly burnup versus initial nominal enrichment. Cells acceptable for Region 1, Region 2; and Region 3 assembly storage are indicated in Figures 5.6-1 and 5.6-2. Assemblies that are acceptable for storage in Region 1, Region 2, and Region 3 must meet the design criteria that define the regions as follows:
 1. Region 1 is designed to accommodate new fuel with a maximum nominal enrichment of 4.95 wt% U-235, or spent fuel regardless of the discharge fuel burnup.
 2. Region 2 is designed to accommodate fuel of 4.95% initial nominal enrichment burned to at least 50,000 MWD/MTU, or fuel of other enrichments with equivalent reactivity.
 3. Region 3 is designed to accommodate fuel of 4.95% initial nominal enrichment burned to at least 38,000 MWD/MTU, or fuel of other enrichments with equivalent reactivity.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 241 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 222 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 December 22, 1999, 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 delete TS 5.4.2, "Reactor Coolant System Volume," regarding the reactor coolant system (RCS) volume information. Information concerning the RCS volume is included in the D. C. Cook Updated Final Safety Analyses Report (UFSAR), and any changes to the information are controlled in accordance with 10 CFR 50.59.

2.0 EVALUATION

The nominal RCS volumes currently contained in Unit 1 and Unit 2 TS 5.4.2 do not reflect the actual RCS volumes that will exist when the units are restarted. For Unit 1, replacement of the steam generators during the current outage will result in a small change (less than 2 percent) to total RCS volume. For Unit 2, TS 5.4.2 was not updated to reflect similar small changes to actual RCS volume after replacement of steam generators in 1988. Therefore, the TS 5.4.2 values for RCS volume need to be revised.

The UFSAR includes values for total RCS volume and RCS component and piping volumes that are more detailed and complete than the approximate RCS volumes listed in Unit 1 and Unit 2 TS 5.4.2. These more detailed values are used as design inputs to the actual UFSAR Chapter 14 accident analyses, and include values for RCS volume at previously evaluated steam generator tube plugging limits. Therefore, TS 5.4.2 is redundant to the UFSAR.

10 CFR 50.36(c)(4) governs the contents of Technical Specification (TS) Section 5.0, "Design Features." 10 CFR 50.36(c)(4) states, "Design features to be included are those features of the facility such as materials of construction and geometric arrangements, which, if altered or modified, would have a significant effect on safety and are not covered in categories described in paragraphs (c) (1), (2), and (3) of this section." Reactor coolant system volume information

does not describe a material of construction for the RCS, nor does it specify a required geometric arrangement for the RCS.

As stated in 10 CFR 50.36(c)(2)(ii)(B), the TS limiting conditions for operation must be established for "process variables, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." TS Section 3/4.4, "Reactor Coolant System," includes the limiting conditions for operation related to the RCS, and includes information either limiting changes to, or derived from, RCS volume. For example, TS 3/4.4.4, "Pressurizer," specifies the minimum allowable water volume in the pressurizer in Modes 1, 2, and 3. In addition, TS 3/4.4.5, "Steam Generators," requires reporting of the number of steam generator tubes plugged following each inservice inspection of the steam generator tubes to the NRC. Therefore, the most significant variables related to RCS volume are already covered in these TS sections, meeting the intent of 10 CFR 50.36(c)(4).

Changes to the actual RCS volume can result from physical modifications to RCS components, changes to procedures affecting pressurizer pressures and levels, or by plugging of steam generator tubes. Changes to the facility and procedures are required to be evaluated in accordance with 10 CFR 50.59, which ensures that changes to RCS volume as a result of physical modifications and procedure changes are evaluated for impact on the plant accident analyses. Steam generator tube plugging limits are evaluated in the UFSAR to ensure acceptability of the limits on the plant accident analyses.

Since detailed RCS information already exists in the UFSAR, and any method by which the RCS volume could be changed is required to be evaluated in accordance with 10 CFR 50.59, then including this information in the TS is not necessary to ensure that a significant effect on safety does not occur. In addition, since TS Section 3/4.4 already includes the limiting conditions for operation related to the RCS, and includes information either limiting changes to, or derived from, RCS volume, then including RCS volume in TS Section 5.0 is not required as allowed by 10 CFR 50.46(c)(4).

The original TS were developed prior to the most recent guidance provided in NUREG-1431, "Standard Technical Specifications – Westinghouse Plants." NUREG-1431 does not include RCS volume information in TS Section 4, "Design Features," as this information does not meet the criteria for inclusion in the TS, and is not considered necessary for compliance with 10 CFR 50.36(c)(4).

The proposed change to remove this information from TS does not affect any accident initiators or precursors. Elimination of the RCS volume information from the TS does not change the methods for plant operation or actions to be taken in the event of an accident. The deletion of the RCS volume information from the TS does not change the methods of plant operation or modify plant systems, structures, or components. No new methods of plant operation are created. As such, the proposed change does not affect any accident initiators or precursors or create new accident initiators or precursors. The deletion of the RCS volume information from the TS does not affect safety limits or limiting safety system settings. Plant operational parameters are not affected. The proposed change does not modify the quantity of radioactive material available for release in the event of an accident. As such, the proposed change will not affect any previous safety margin assumptions or conditions. The actual volume of the RCS is not affected by the change, only the location of the text describing the volume. More

detailed and complete RCS component and piping volume information is included in the UFSAR, and any changes to that information would be evaluated prior to implementation in accordance with 10 CFR 50.59.

The licensee proposes to make administrative changes to the format of the Unit 1 and Unit 2 TS pages in an ongoing effort to improve their appearance. The changes include addition of "5.0 DESIGN FEATURES" to the header, addition of "Page" to the footer, deletion of "NO." from the footer, addition of separating lines at the bottom of the header and the top of the footer, and continuous underlining for the titles of TS Sections 5.5 and 5.6. The staff finds that the proposed administrative changes do not represent a reduction in safety or alter the TS requirements. The administrative changes are intended to maintain consistency and enhance usability and clarity of the TS.

3.0 SUMMARY

Based on the evaluation, the staff finds that proposed TS changes do not reduce the level of safety currently maintained by the TS, is consistent with NUREG-1431, and is in accordance with 10 CFR 50.36. Therefore, the staff finds the proposed changes to the TSs are 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

Pursuant to 10 CFR 51.21, 51.32, and 50.35, an environmental assessment and finding of no significant impact have been prepared and published in the *Federal Register* on March 1, 2000 (65 FR 11100). Accordingly, based upon the environmental assessment, the staff has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

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 Stang

Date: March 1, 2000