

August 22, 1995

Mr. E. E. Fitzpatrick, Vice President
Indiana Michigan Power Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, OH 43215

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF
AMENDMENTS RE: FUEL RECONSTITUTION (TAC NOS. M92494 AND M92495)

Dear Mr. Fitzpatrick:

The Commission has issued the enclosed Amendment No. 199 to Facility Operating License No. DPR-58 and Amendment No. 184 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated May 25, 1995 and supplemented June 30, 1995.

The amendments allow fuel reconstitution when analyzed in accordance with NRC approved methodologies. The amendment is a line item improvement based on NRC Generic Letter 90-02, supplement 1.

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

Sincerely,

Original signed by

John B. Hickman, 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. 199 to DPR-58
- 2. Amendment No. 184 to DPR-74
- 3. Safety Evaluation

cc w/encl: See next page

DOCUMENT NAME: G:\WPDOCS\DCCOOK\C092494.AMD

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OFFICE	LA:PD31	E	PM:PD31	BC:SRXB	OGC RMW #	D:PD31
NAME	CJamerson		JHickman	RCJones, Jr.	RWeisman	JHannon
DATE	7/11/95		7/12/95	7/13/95	7/20/95	8/17/95

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*No legal objection,
with comment, subject
to expiration of comment
period.

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Mr. E. E. Fitzpatrick
Indiana Michigan Power Company

Donald C. Cook Nuclear Plant

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 NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 199
License No. DPR-58

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated May 25, 1995 and supplemented June 30, 1995, 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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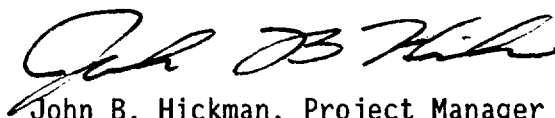
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 199, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



John B. Hickman, Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: August 22, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 199
TO FACILITY OPERATING LICENSE NO. DPR-58
DOCKET NO. 50-315

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE

5-4

INSERT

5-4

5.0 DESIGN FEATURES

5.2 CONTAINMENT (Continued)

DESIGN PRESSURE AND TEMPERATURE

- 5.2.2 The reactor containment building is designed and shall be maintained in accordance with the original design provisions contained in Section 5.2.2 of the FSAR.

PENETRATIONS

- 5.2.3 Penetrations through the reactor containment building are designed and shall be maintained in accordance with the original design provisions contained in Section 5.4 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

5.3 REACTOR CORE

FUEL ASSEMBLIES

- 5.3.1 The reactor core shall contain 193 fuel assemblies with each fuel assembly containing 204 fuel rods clad with Zircaloy-4, except that limited substitutions of zirconium alloy or stainless steel filler rods, in accordance with NRC-approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff-approved codes and methods, and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in non-limiting core regions. Each fuel rod shall have a nominal active fuel length of 144 inches. The initial core loading shall have a maximum enrichment of 3.35 weight percent U-235. Reload fuel shall be similar in physical design to the initial core loading and shall have a maximum nominal enrichment of 4.95 weight percent U-235.

CONTROL ROD ASSEMBLIES

- 5.3.2 The reactor core shall contain 53 full length and no part length control rod assemblies. The full length control rod assemblies shall contain a nominal 142 inches of absorber material. The nominal values of absorber material shall be 80 percent silver, 15 percent indium and 5 percent cadmium. All control rods shall be clad with stainless steel tubing.

5.4 REACTOR COOLANT SYSTEM

DESIGN PRESSURE AND TEMPERATURE

- 5.4.1 The reactor coolant system is designed and shall be maintained:



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 184
License No. DPR-74

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated May 25, 1995 and supplemented June 30, 1995, 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. 184 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION



John B. Hickman, Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: August 22, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 184

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 pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE

5-4

INSERT

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5.0 DESIGN FEATURES

5.3 REACTOR CORE

FUEL ASSEMBLIES

- 5.3.1 The reactor core shall contain 193 fuel assemblies with each fuel assembly containing 264 fuel rods clad with Zircaloy-4, except that limited substitutions of zirconium alloy or stainless steel filler rods, in accordance with NRC-approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff-approved codes and methods, and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in non-limiting core regions. Each fuel rod shall have a nominal active fuel length of 144 inches. The initial core loading shall have a maximum enrichment of 3.3 weight percent U-235. Reload fuel shall be similar in physical design to the initial core loading and may be nominally enriched up to 4.95 weight percent U-235.

CONTROL ROD ASSEMBLIES

- 5.3.2 The reactor core shall contain 53 full length and no part length control rod assemblies. The full length control rod assemblies shall contain a nominal 142 inches of absorber material. The nominal values of absorber material shall be 80 percent silver, 15 percent indium and 5 percent cadmium. All control rods shall be clad with stainless steel tubing.

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.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 199 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 184 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

The NRC issued Generic Letter (GL) 90-02, "Alternative Requirements for Fuel Assemblies in Design Features Section of Technical Specifications," on February 1, 1990, to propose a line-item improvement to plant Technical Specifications (TS) by providing alternate requirements for fuel assemblies in the design features section of the TS. The GL states that, on a plant-specific basis, "the staff has approved changes to these requirements that provide flexibility for improved fuel performance by permitting timely removal of fuel rods that are found to be leaking during a refueling outage or are determined to be probable sources of future leakage." The NRC issued Supplement 1 to GL 90-02 on July 31, 1992, to clarify the limitations on the application of NRC-approved analytical methods related to fuel assembly reconstitution. Supplement 1 also withdrew and replaced the model TS recommended in the initial GL 90-02 to be consistent with realistic reconstitution configurations. The model TS change in GL 90-02, Supplement 1, is also reflected in NUREG-1431, "Westinghouse Standard Technical Specifications Westinghouse Plants," September 1992, the *improved* Standard Technical Specifications (*i*STS).

By letter dated May 25, 1995, 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, Unit Nos. 1 and 2. The proposed amendments would allow fuel reconstitution in accordance with NRC-approved methodologies. The reconstitutions may be performed under the provisions of 10 CFR 50.59 provided that the required safety analyses are performed with NRC staff-approved methodologies, which are applied to assembly configurations that lie within the scope of the reviewed fuel lattice configurations. The licensee supplemented the requested amendments on June 30, 1995, to propose TS wording which more completely followed the guidance in the NRC GL. The June 30 supplement was within the scope of the original application and did not affect the staff's initial proposed no significant hazards considerations determination.

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2.0 EVALUATION

The proposed amendments would modify TS Section 5.3.1, "Fuel Assemblies," to allow "limited substitutions of zirconium alloy or stainless steel filler rods, in accordance with NRC-approved applications of fuel rod configurations." The licensee states that any reconstitution performed will be done in accordance with an already approved methodology, or a specific methodology will be submitted for NRC approval.

The licensee repeated in its submittal the staff definition of an NRC-approved methodology as provided in GL 90-02, Supplement 1:

The staff considers an NRC-approved methodology to be any methodology that the NRC staff has explicitly approved in a written safety evaluation or a plant-specific technical bases. That NRC-approved methodology must be used only for the purpose and the scope of applications specified in the reviewed document as approved or modified in the NRC approval documentation.

The licensee's submittal is consistent with the wording proposed in NRC Generic Letter 90-02, supplement 1 and incorporated into the iSTS. The proposed change would allow the licensee to perform fuel reconstitution only as allowed by methodologies previously approved by the NRC. Therefore, the change only obviates the need for a TS amendment every time leaking or potentially leaking fuel is identified. The definition of an NRC-approved methodology as provided in GL 90-02, Supplement 1, and reiterated by the licensee assures that the proposed reconstitution has been adequately reviewed by the staff prior to implementation. In addition, the change requires the licensee to show by tests or analyses that the reconstituted fuel assemblies comply with all fuel safety design bases. While the licensee may place lead test assemblies that have not completed representative testing in non-limiting core regions, the proposed change allows this only in non-limiting core regions (i.e., where the lead test assembly does not become the assembly with least thermal margin to either the Departure from Nucleate Boiling or Linear Heat Generation Rate design limits at any time during its cycle life) and where analyses, using NRC approved methodologies, show that these assemblies comply with all fuel safety design bases. Based on the above, the staff finds the proposed changes to be 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

The amendments change the requirements with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 (60 FR 35081). 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: John Hickman

Date: August 22, 1995

DATED: August 22, 1995

AMENDMENT NO. 199 TO FACILITY OPERATING LICENSE NO. DPR-58-D. C. COOK-UNIT 1
AMENDMENT NO. 184 TO FACILITY OPERATING LICENSE NO. DPR-74-D. C. COOK-UNIT 2

Docket File

PUBLIC

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