

Docket No. 50-315

DEC 27 1974

Indiana and Michigan Electric Company
Indiana and Michigan Power Company
ATTN: Mr. John A. Tillinghast
Vice President
P. O. Box 18
Bowling Green Station
New York, New York 10004

Gentlemen:

In response to your request of December 27, 1974, the Commission has issued Amendment No. 2 to Facility Operating License DPR-58 to permit certain subcritical testing simultaneously with completion of the cleaning of ice from the air flow channels of the ice condenser of the Donald C. Cook Nuclear Plant, Unit 1. A signed copy of the amendment is enclosed. A copy of a related notice which has been forwarded to the Office of the Federal Register for filing and publication is also enclosed.

Amendment No. 2 to DPR-58 consists of Change No. 2 to the Technical Specifications. This change permits subcritical testing of the reactor until January 7, 1975, at reactor coolant temperatures less than 350°F and reactor coolant pressures less than 400 psig with air flow channels in the ice condenser containing ice blockage no greater than the quantities listed in Table 1 attached to your December 27, 1974 letter. The cleaning of ice from the flow channels is expected to be completed by January 7, 1975, so that the flow channels will be operable as defined in Technical Specification 3.6.5.1(b) and testing up to the design basis reactor coolant temperature (550°F) and design basis reactor coolant pressure (2235 psig) can be performed.

The Regulatory staff's evaluation of Change No. 2 to the Technical Specifications is enclosed. The staff has concluded that performance of these subcritical tests within the limits in Change No. 2 to the Technical Specifications will not present any danger to the health

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Carst Jr.

OFFICE ▶						
SURNAME ▶						
DATE ▶						

Indiana and Michigan Electric Company

-2-

and safety of the public; nor will it result in (i) any significant increase in the probability of an accident or (ii) a significant increase in the consequences of an accident or (iii) a significant decrease in a safety margin.

Sincerely,

Karl Kniel, Chief
 Light Water Reactors Branch 2-2
 Directorate of Licensing

Enclosures:
 As stated

ccs:
 Listed on page 3

DISTRIBUTION:

- AEC PDR
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- Docket file
- LWR 2-2 Reading
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- W. O. Miller
- RABenedict
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- SKari
- LWR 2 Branch Chiefs
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- BScharf (15)
- KGoller

bcc:

- J. R. Buchanan, ORNL
- T. R. Abernathy, DTIE

OFFICE ▶	LWR 2-2 <i>ML</i>	LWR 2-2 <i>ML</i>	OGC <i>SA</i>		
SURNAME ▶	LKintner:nlg	Kniel	SA <i>W. K. King</i>		
DATE ▶	12/27/74	12/27/74	12/27/74		

INDIANA AND MICHIGAN ELECTRIC COMPANY

INDIANA AND MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT 1

FACILITY OPERATING LICENSE

License DPR-58
Amendment No. 2

1. The Atomic Energy Commission (the Commission) has found that:
 - A. The application for amendment by Indiana and Michigan Electric Company and Indiana and Michigan Power Company (the licensees) dated December 27, 1974, 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.c(2) of Facility License No. DPR-58

	is hereby amended to read as follows:				
OFFICE ➤					
SURNAME ➤					
DATE ➤					

"(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensees shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 2."

3. This license amendment is effective as of the date of its issuance.

FOR THE ATOMIC ENERGY COMMISSION

Voss A. Moore, Assistant Director
for Light Water Reactors, Group 2

Attachment:
Change No. 2 to the
Technical Specifications

Date of Issuance: DEC 27 1974

OFFICE >	LWR 2-2	LWR 2-2	OGC STJ	AD/LWR-2		
SURNAME >	Kintner: ng	Kniel	SA T. A. G. by	V. A. Moore		
DATE >	12/27/74	12/27/74	12/27/74	12/27/74		



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

Docket No. 50-315

DEC 27 1974

Indiana and Michigan Electric Company
Indiana and Michigan Power Company
ATTN: Mr. John A. Tillinghast
Vice President
P. O. Box 18
Bowling Green Station
New York, New York 10004

Gentlemen:

In response to your request of December 27, 1974, the Commission has issued Amendment No. 2 to Facility Operating License DPR-58 to permit certain subcritical testing simultaneously with completion of the cleaning of ice from the air flow channels of the ice condenser of the Donald C. Cook Nuclear Plant, Unit 1. A signed copy of the amendment is enclosed. A copy of a related notice which has been forwarded to the Office of the Federal Register for filing and publication is also enclosed.


Amendment No. 2 to DPR-58 consists of Change No. 2 to the Technical Specifications. This change permits subcritical testing of the reactor until January 7, 1975, at reactor coolant temperatures less than 350°F and reactor coolant pressures less than 400 psig with air flow channels in the ice condenser containing ice blockage no greater than the quantities listed in Table 1 attached to your December 27, 1974 letter. The cleaning of ice from the flow channels is expected to be completed by January 7, 1975, so that the flow channels will be operable as defined in Technical Specification 3.6.5.1(b) and testing up to the design basis reactor coolant temperature (550°F) and design basis reactor coolant pressure (2235 psig) can be performed.

The Regulatory staff's evaluation of Change No. 2 to the Technical Specifications is enclosed. The staff has concluded that performance of these subcritical tests within the limits in Change No. 2 to the Technical Specifications will not present any danger to the health

DEC 8 7 1974

and safety of the public; nor will it result in (i) any significant increase in the probability of an accident or (ii) a significant increase in the consequences of an accident or (iii) a significant decrease in a safety margin.

Sincerely,

for 

Karl Kniel, Chief
Light Water Reactors Branch 2-2
Directorate of Licensing

Enclosures:
As stated

ccs:
Listed on page 3

CCS:

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Assistant Vice President
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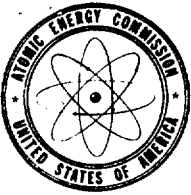
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Mr. Wade Schuler, Supervisor
Lake Township
Baroda, Michigan 49101

Mr. W. Mabry, Mayor
City of Bridgman, Michigan 49106

Chief, TIRB
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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

INDIANA AND MICHIGAN ELECTRIC COMPANY

INDIANA AND MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT 1

FACILITY OPERATING LICENSE

License DPR-58
Amendment No. 2

1. The Atomic Energy Commission (the Commission) has found that:
 - A. The application for amendment by Indiana and Michigan Electric Company and Indiana and Michigan Power Company (the licensees) dated December 27, 1974, 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C(2) of Facility 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, are hereby incorporated in the license. The licensees shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 2."

3. This license amendment is effective as of the date of its issuance.

FOR THE ATOMIC ENERGY COMMISSION

/s/ Voss A. Moore by JFS

Voss A. Moore, Assistant Director
for Light Water Reactors, Group 2

Attachment:
Change No. 2 to the
Technical Specifications

Date of Issuance: 27 December 1974

CHANGE NO. 2

to

TECHNICAL SPECIFICATIONS

DPR-58

- a. To Specification 3.6.5.1 under Applicability, change Modes "3 and 4" to "3* and 4*" and add a foot note:

"*See Special Test Exception 3.10.6."

- b. To Specification 3.10 add:

"3/4 10.6 Initial Subcritical Testing

This special test exception permits subcritical tests until January 7, 1975, at reactor coolant temperatures equal to or less than 350°F and at reactor coolant pressures equal to or less than 400 psig with ice blockage of the air flow channels in the ice condenser equal to or less than those quantities listed in Table 1, attached to licensees' letter dated December 27, 1974."

TABLE 1

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 1
PERCENT ICE CONDENSER FLOW BLOCKAGE
AS OF DECEMBER 26, 1974

<u>RAY</u>	<u>% FLOW BLOCKAGE</u>
1	24
2	25
3	5
4	0
5	0
6	3
7	1
8	26
9	11
10	10
11	40
12	24
13	28
14	28
15	28
16	0
17	18
18	14
19	22
20	32
21	45
22	48
23	26
24	<u>30</u>
<u>Average</u>	20.3

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING

SUPPORTING AMENDMENT NO. 2 TO FACILITY OPERATING LICENSE NO. DPR-58

(CHANGE NO. 2 TO THE TECHNICAL SPECIFICATIONS)

INDIANA AND MICHIGAN ELECTRIC COMPANY

INDIANA AND MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT 1

Docket No. 50-315

INTRODUCTION

By letter dated December 27, 1974, Indiana and Michigan Power Company and Indiana and Michigan Electric Company submitted an application for a change to the Technical Specifications appended to Facility Operating License No. DPR-58 for the Donald C. Cook Nuclear Plant, Unit 1.

This letter requested temporary relief from Technical Specification 3.6.5.1 (b) to perform certain subcritical tests, limited to a maximum reactor coolant condition of 350°F and 400 psig. The boron concentration of the reactor coolant will be maintained greater than 1800 ppm. The time period at this reactor condition would be no more than 10 days.

The letter requested this temporary relief from Technical Specification 3.6.5.1 (b) because the ice condenser flow channels are not yet cleaned of ice to the degree required by Technical Specification 3.6.5.1 (b). The licensees are currently cleaning the flow channels of the ice condenser and estimate that 10 days are required to complete this cleaning. After this 10-day period, the requirement of Technical Specification 3.6.5.1 (b) would be met.

The licensee provided an analysis indicating that should a loss of coolant accident occur at a lower than design pressure and temperature reactor condition and a conservatively assumed ice condenser flow area blockage of 50% or less, the resultant pressures are less than design values. Data taken from visual inspections of the ice condenser at the Donald C. Cook Nuclear Plant were provided to show that the current flow channel average blockage is about 20%.

EVALUATION

The Regulatory staff has reviewed the licensees' analysis and data provided in their December 27, 1974 letter. The conditions postulated include the maximum requested reactor coolant system conditions of 350°F and 400 psig. The licensees calculate maximum differential pressure between the lower and upper compartment (i.e., differential pressure across the operating deck) of 3.53 psi and a maximum containment pressure of less than 5 psig which are below the design pressures of the operating deck (16.6 psi) and containment (12 psig), respectively. The licensees have based these calculations on the conservative assumption that 50% of the total ice condenser flow area blocked which is greater than the actual average flow blockage of 20% estimated by the licensees as given in Table 1 attached to its December 27, 1974 letter. The licensees' estimates have been confirmed by the site representative of the Directorate of Regulatory Operations.

The licensees have performed the indicated calculations in a manner found acceptable during the review of the Donald C. Cook Nuclear Plant by using Westinghouse's TMD computer program. This method of analysis is acceptable to us and since the results of the calculation performed by the licensees indicates that design conditions will not be exceeded, we conclude that the licensees have provided sufficient justification to allow the requested change to Technical Specification 3.6.5.1 (b) to allow subcriticality tests with reactor coolant conditions of up to 350°F and 400 psig for a time period of 10 days.

CONCLUSION

Based on its review of the licensees' analysis as summarized above, the staff concludes that Change No. 2 to the Technical Specifications does not involve a significant hazards consideration because the effect on calculated containment accident pressures with the lower than design reactor coolant conditions for these tests more than offset the effect on pressures due to the partial blockage of the flow channels. The staff also concluded that this change in Technical Specifications does not involve a significant hazards consideration because: (1) it does not involve a significant increase in the probability of an accident, (2) it does not involve a significant increase in the consequences of an accident, and (3) it does not involve a significant decrease in a safety margin.

H. Schirring for

Robert A. Benedict, Project Manager
Light Water Reactors Branch 2-2
Directorate of Licensing

for J. Kniel

Karl Kniel, Chief
Light Water Reactors Branch 2-2
Directorate of Licensing

DEC 27 1974

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-315

INDIANA AND MICHIGAN ELECTRIC COMPANY

INDIANA AND MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT UNIT 1

NOTICE OF ISSUANCE OF AMENDMENT TO

FACILITY OPERATING LICENSE

Notice is hereby given that the U.S. Atomic Energy Commission (the Commission) has issued Amendment No. 2 to Facility Operating License No. DPR-58 issued to Indiana and Michigan Electric Company and Indiana and Michigan Power Company. The amendment is effective as of its date of issuance.

The amendment permits performance of certain subcritical testing of the reactor simultaneously with the completion of cleaning the ice from the air flow channels of the ice condenser in accordance with the provisions of the license and Change No. 2 to the Technical Specifications.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings required by the Act and the Commission's rules and regulations in 10 CFR Chapter 1, which are set forth in the license amendment.

For further details with respect to this action, see (1) the application for amendment dated December 27, 1974, (2) Amendment No. 2

to License No. DPR-58, with any attachments, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the St. Joseph Public Library, 500 Market Street, St. Joseph, Michigan 49085. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this 27th day of December 1974.

FOR THE ATOMIC ENERGY COMMISSION



Lester L. Kintner, Acting Chief
Light Water Reactors Branch 2-2
Directorate of Licensing