

May 29, 1990

Docket Nos. 50-315
and 50-316

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Mr. Milton P. Alexich, Vice President
Indiana Michigan Power Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Alexich:

SUBJECT: AMENDMENT NOS. 138 AND 125 TO FACILITY OPERATING LICENSE NOS. DPR-58
AND DPR-74: (TAC NOS. 75800 AND 75801)

The Commission has issued the enclosed Amendment No. 138 to Facility Operating License No. DPR-58 and Amendment No. 125 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Units Nos. 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated December 29, 1989.

These amendments allow an extended surveillance interval of 18 months for the visual inspection of the ice condenser's lower support structures and turning vanes, and for the testing of the lower inlet doors of the ice condenser.

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,

/s/

Joseph Gitter, Project Manager
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 138 to DPR-58
2. Amendment No. 125 to DPR-74
3. Safety Evaluation

cc w/enclosures:
See next page

LA/PD31: DRSP
MRS Shuttleworth
4/24/90 *msl*

PM/PD31: DRSP
JGitter
7/21/90

(A)D/PD31: DRSP
JThoma
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5/7/90

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

May 29, 1990

Docket Nos. 50-315
and 50-316

Mr. Milton P. Alexich, Vice President
Indiana Michigan Power Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Alexich:

SUBJECT: AMENDMENT NOS. 138 AND 125 TO FACILITY OPERATING LICENSE NOS. DPR-58
AND DPR-74: (TAC NOS. 75800 AND 75801)

The Commission has issued the enclosed Amendment No. 138 to Facility Operating License No. DPR-58 and Amendment No. 125 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Units Nos. 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated December 29, 1989.

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Project Directorate III-1
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Office of Nuclear Reactor Regulation

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3. Safety Evaluation

cc w/enclosures:
See next page

Mr. Milton Alexich
Indiana Michigan Power Company

Donald C. Cook Nuclear Plant

cc:
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Special Assistant to the Governor
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Lansing, Michigan 48909

Nuclear Facilities and Environmental
Monitoring Section Office
Division of Radiological Health
Department of Public Health
3500 N. Logan Street
Post Office Box 30035
Lansing, Michigan 48909



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 138
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 December 29, 1989, 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. 138, 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 its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Dominic C. DiIanni, Acting Director
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 29, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 138
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 marginal lines indicating the area of change.

REMOVE

3/4 6-27

3/4 6-30

3/4 6-31

INSERT

3/4 6-27

3/4 6-30

3/4 6-31

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

shall be constituted of one basket each from Radial Rows 1, 2, 4, 6, 8 and 9 (or from the same row of an adjacent bay if a basket from a designated row cannot be obtained for weighing) within each bay. If any basket is found to contain less than 1220 pounds of ice, a representative sample of 20 additional baskets from the same bay shall be weighed. The minimum average weight of ice from the 20 additional baskets and the discrepant basket shall not be less than 1220 pounds/basket at a 95% level of confidence.

The ice condenser shall also be subdivided into 3 groups of baskets, as follows: Group 1 - bays 1 through 8, Group 2 - bays 9 through 16, and Group 3 - bays 17 through 24. The minimum average ice weight of the sample baskets from Radial Rows 1, 2, 4, 6, 8 and 9 in each group shall not be less than 1220 pounds/basket at a 95% level of confidence.

The minimum total ice condenser ice weight at a 95% level of confidence shall be calculated using all ice basket weights determined during this weighting program and shall not be less than 2,371,450 pounds.**

3. Verifying, by a visual inspection of at least two flow passages per ice condenser bay, that the accumulation of frost or ice on the top deck floor grating, on the intermediate deck and on flow passages between ice baskets and past lattice frames is restricted to a nominal thickness of 3/8 inches. If one flow passage per bay is found to have an accumulation of frost or ice greater than this thickness, a representative sample of 20 additional flow passages from the same bay shall be visually inspected. If these additional flow passages are found acceptable, the surveillance program may proceed considering the single deficiency as unique and acceptable. More than one restricted flow passage per bay is evidence of abnormal degradation of the ice condenser.*
 - c. At least once per 18 months by verifying, by a visual inspection, each ice condenser bay, that the accumulation of frost or ice on the lower inlet plenum support structures and turning vanes is restricted to a nominal thickness of 3/8 inches. An accumulation of frost and ice greater than this thickness is evidence of abnormal degradation of the ice condenser.*
 - d. At least once per 40 months by lifting and visually inspecting the accessible portions of at least two ice baskets from each 1/3 of the ice condenser and verifying that the ice baskets are free of detrimental structural wear, cracks, corrosion or other damage. The ice baskets shall be raised at least 12 feet for this inspection.

* The provisions of Specification 4.0.6 are applicable.

** The provisions of Specification 4.0.7 are applicable.

CONTAINMENT SYSTEMS

ICE CONDENSER DOORS

LIMITING CONDITION FOR OPERATION

3.6.5.3 The ice condenser inlet doors, intermediate deck doors, and top deck doors shall be closed and OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more ice condenser doors open or otherwise inoperable, POWER OPERATION may continue for up to 14 days provided the ice bed temperature is monitored at least once per 4 hours and the maximum ice bed temperature is maintained less than or equal to 27°F; otherwise, restore the doors to their closed positions or OPERABLE status (as applicable) within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.3.1 Inlet Doors - Ice condenser inlet doors shall be:

- a. Continuously monitored and determined closed by the inlet door position monitoring system, and
- b. Demonstrated OPERABLE during shutdown at least once per 18 months by:
 1. Verifying that the torque required to initially open each door is less than or equal to 675 inch pounds.
 2. Verifying that opening of each door is not impaired by ice, frost or debris.
 3. Testing each one of the doors and verifying that the torque required to open each door is less than 195 inch-pounds when the door is 40 degrees open. This torque is defined as the "door opening torque" and is equal to the nominal door torque plus a frictional torque component.

*The provisions of Specification 4.0.6 are applicable.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4. Testing each of the doors and verifying that the torque required to keep each door from closing is greater than 78 inch-pounds when the door is 40 degrees open. This torque is defined as the "door closing torque" and is equal to the nominal door torque minus a frictional torque component.
5. Calculation of the frictional torque of each door tested in accordance with 3 and 4, above. The calculated frictional torque shall be less than or equal to 40 inch-pounds.

4.6.5.3.2 Intermediate Deck Doors - Each ice condenser intermediate deck door shall be:

- a. Verified closed and that opening of each door is not impaired by ice, frost or debris by a visual inspection at least once per 7 days, and
- b. Demonstrated OPERABLE at least once per 18 months by visually verifying no structural deterioration, by verifying free movement of the vent assemblies, and by ascertaining free movement when lifted with the applicable force shown below.

<u>Door</u>	<u>Lifting Force</u>
1. Adjacent to Crane Wall	Less than or equal to 37.4 lbs.
2. Paired with Door Adjacent to Crane Wall	Less than or equal to 33.8 lbs.
3. Adjacent to Containment Wall	Less than or equal to 31.8 lbs.
4. Paired with Door Adjacent to Containment Wall	Less than or equal to 31.0 lbs.



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 125
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 December 29, 1989, 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.

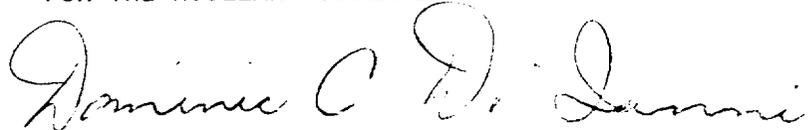
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 125, 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 its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Dominic C. DiIanni, Acting Director
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 29, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 125

TO 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 marginal lines indicating the area of change.

REMOVE

3/4 6-36

3/4 6-39

INSERT

3/4 6-36

3/4 6-39

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

shall be constituted of one basket each from Radial Rows 1, 2, 4, 6, 8 and 9 (or from the same row of an adjacent bay if a basket from a designated row cannot be obtained for weighing) within each bay. If any basket is found to contain less than 1220 pounds of ice, a representative sample of 20 additional baskets from the same bay shall be weighed. The minimum average weight of ice from the 20 additional baskets and the discrepant basket shall not be less than 1220 pounds/basket at a 95% level of confidence.

The ice condenser shall also be subdivided into 3 groups of baskets, as follows: Group 1 - bays 1 through 8, Group 2 - bays 9 through 16, and Group 3 - bays 17 through 24. The minimum average ice weight of the sample baskets from Radial Rows 1, 2, 4, 6, 8 and 9 in each group shall not be less than 1220 pounds/basket at a 95% level of confidence.

The minimum total ice condenser ice weight at a 95% level of confidence shall be calculated using all ice basket weights determined during this weighing program and shall not be less than 2,371,450 pounds.

3. Verifying, by a visual inspection of at least two flow passages per ice condenser bay, that the accumulation of frost or ice on the top deck floor grating, on the intermediate deck and on flow passages between ice baskets and past lattice frames is restricted to a nominal thickness of 3/8 inches. If one flow passage per bay is found to have an accumulation of frost or ice greater than this thickness, a representative sample of 20 additional flow passages from the same bay shall be visually inspected. If these additional flow passages are found acceptable, the surveillance program may proceed considering the single deficiency as unique and acceptable. More than one restricted flow passage per bay is evidence of abnormal degradation of the ice condenser.
- c. At least once per 18 months by verifying, by a visual inspection, of each ice condenser bay, that the accumulation of frost or ice on the lower plenum support structures and turning vanes is restricted to a nominal thickness of 3/8 inches. An accumulation of frost or ice greater than this thickness is evidence of abnormal degradation of the ice condenser.
- d. At least once per 40 months by lifting and visually inspecting the accessible portions of at least two ice baskets from each 1/3 of the ice condenser and verifying that the ice baskets are free of detrimental structural wear, cracks, corrosion or other damage. The ice baskets shall be raised at least 12 feet for this inspection.

CONTAINMENT SYSTEMS

ICE CONDENSER DOORS

LIMITING CONDITION FOR OPERATION

3.6.5.3 The ice condenser inlet doors, intermediate deck doors, and top deck doors shall be closed and OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more ice condenser doors open or otherwise inoperable, POWER OPERATION may continue for up to 14 days provided the ice bed temperature is monitored at least once per 4 hours and the maximum ice bed temperature is maintained less than or equal to 27°F; otherwise, restore the doors to their closed positions or OPERABLE status (as applicable) within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.3.1 Inlet Doors - Ice condenser inlet doors shall be:

- a. Continuously monitored and determined closed by the inlet door position monitoring system, and
- b. Demonstrated OPERABLE during shutdown at least once per 18 months by:
 1. Verifying that the torque required to initially open each door is less than or equal to 675 inch pounds.
 2. Verifying that opening of each door is not impaired by ice, frost or debris.
 3. Testing each one of the doors and verifying that the torque required to open each door is less than 195 inch-pounds when the door is 40 degrees open. This torque is defined as the "door opening torque" and is equal to the nominal door torque plus a frictional torque component.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 138 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 125 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

By letter dated December 29, 1989, the Indiana Michigan Power Company, the licensee for the Donald C. Cook Plant, Units 1 and 2, requested an amendment to change the Technical Specifications (TS) in order to extend certain ice condenser surveillance intervals to 18 months. The existing TS requires these ice condenser surveillances to be performed at 9-month intervals. The proposed request would eliminate the mid-cycle outages which are required for these surveillances which cannot be performed at power.

The following evaluation concerns the staff's review of the proposed 18-month surveillance interval for inspection of frost and ice accumulation on the lower inlet support structures and turning vanes, and testing of the lower inlet doors including verification of the power spring torque setting.

2.0 EVALUATION

The ice condenser performs the mitigative function of limiting containment pressure buildup following a loss-of-coolant accident (LOCA) or high energy line break (HELB). To ensure that the ice condenser will fulfill its function, buildup of frost and ice in the flow passages for the steam resulting from these accidents must be limited. The requested change increases the surveillance interval for an area within the ice condenser that is not very susceptible to frost and ice buildup based on operational experience. The licensee provided the operational history of the current 9-month surveillance which shows that significant frost and ice buildup has not generally been found on the subject components and structures during the last 5 years. Any evidence of excessive frost or ice buildup on the lower support structures and turning vanes was included in this history.

The primary purpose of the lower inlet doors surveillance is to determine that the doors are capable of opening properly when required during a LOCA or HELB. This is accomplished via the proper spring torque setting. The springs produce a small force to resist door opening during normal and accident

operation. The surveillance in question also requires that various measurements be made of the door spring torque in order to ensure that the required safety functions can be met.

The current D. C. Cook TS require that 50% of the doors be tested at 9 months, with the remaining 50% being tested at 18 months. The testing interval for any door is 18 months. The proposed amendment would require that 100% of the doors be tested each 18 months. Thus the inspection interval for any door does not change. Hence, the staff finds the licensee's justification for the proposed change in the surveillance interval to be acceptable.

Based on the above review, the staff concludes that the licensee's request for an extended 18-month surveillance interval on the ice condenser will not likely result in excessive frost and ice buildup on lower support structures, turning vanes, and inlet doors. In addition, the extension to 18 months for the surveillance interval will not increase the likelihood that lower inlet door spring torques will be outside their required ranges. Therefore, the extended surveillance interval request is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and a change in a surveillance requirement. We have 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these 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 these amendment.

4.0 CONCLUSION

We have 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.

Date: May 29, 1990

Principal Contributor: S. Sanders/SPLB