

April 10, 1991

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. 155 AND 139 TO FACILITY OPERATING LICENSE NOS. DPR-58
AND DPR-74: (TAC NOS. 79464 AND 79465)

The Commission has issued the enclosed Amendment No. 155 to Facility Operating License No. DPR-58 and Amendment No. 139 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications in partial response to your application dated January 15, 1991.

These amendments revise two sections of the Technical Specifications: Section 3/4.8.2.3, D.C. Distribution - Operating; and Section 3/4.8.2.5, D.C. Distribution - Operating - Train N and Battery System. Your requested changes to Section 3/4.8.1, A.C. Sources will be the subject of future correspondence.

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,

Timothy G. Colburn, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 155 to DPR-58
2. Amendment No. 139 to DPR-74
3. Safety Evaluation

cc w/enclosures:
See next page

LA/PD31:DRP345
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3/25/91 *MLA*

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PM/PD31:DRP345
TColburn
3/28/91

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4/11/91
D/PD31:DRP345
LMarsh *WJ*
4/10/91

OGC *OS*
4/12/91

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

April 10, 1991

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. 155 AND 139 TO FACILITY OPERATING LICENSE NOS. DPR-58
AND DPR-74: (TAC NOS. 79464 AND 79465)

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These amendments revise two sections of the Technical Specifications: Section 3/4.8.2.3, D.C. Distribution - Operating; and Section 3/4.8.2.5, D.C. Distribution - Operating - Train N Battery System. Your requested changes to Section 3/4.8.1, A.C. Sources will be the subject of future correspondence.

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,

A handwritten signature in cursive script, reading "Timothy G. Colburn, Sr.".

Timothy G. Colburn, Sr. Project Manager
Project Directorate III-1
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 155 to DPR-58
2. Amendment No. 139 to DPR-74
3. Safety Evaluation

cc w/enclosures:
See next page

Mr. Gene Fitzpatrick
Indiana Michigan Power Company

Donald C. Cook Nuclear Plant

cc:

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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. 155
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 January 15, 1991, 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.

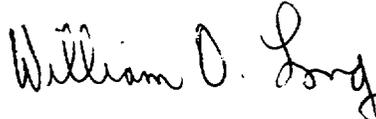
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 155, 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

fm


L. B. Marsh, Director
Project Directorate III-1
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 10, 1991



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. 139
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 January 15, 1991, 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.

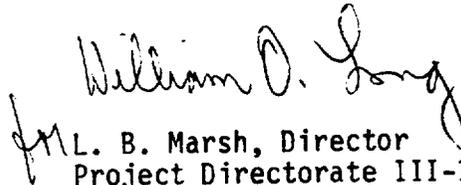
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.139 , 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



for L. B. Marsh, Director
Project Directorate III-1
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 10, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 155

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 8-13

3/4 8-18

INSERT

3/4 8-13

3/4 8-18

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. The pilot cell specific gravity, corrected to 77°F, and full electrolyte level (fluid at the bottom of the maximum level indication mark), is greater than or equal to 1.200,
 3. The pilot cell voltage is greater than or equal to 2.13 volts, and
 4. The overall battery voltage is greater than or equal to 250 volts.
- b. At least once per 92 days by verifying that:
1. The voltage of each connected cell is greater than or equal to 2.13 volts under float charge.
 2. The specific gravity, corrected to 77°F, and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and
 3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.
- c. At least once per 18 months by verifying that:
1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,
 2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material,
 3. The battery charger will supply at least 140 amperes at greater than or equal to 250 volts for at least 4 hours.
- d. At least once per 18 months, perform a battery service test during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the times specified in Table 4.8-2 with the battery charger disconnected. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout this test.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

3. The pilot cell voltage is greater than or equal to 2.13 volts, and
 4. The overall battery voltage is greater than or equal to 250 volts.
- b. At least once per 92 days by verifying that:
1. The voltage of each connected cell is greater than or equal to 2.13 volts under float charge.
 2. The specific gravity, corrected to 77°F and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and
 3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.
- c. At least once per 18 months by verifying that:
1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration.
 2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.
 3. The battery charger will supply at least 10 amperes at greater than or equal to 250 volts for at least 4 hours.
- d. At least once per 18 months perform a battery service test, during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the times specified of Table 4.8-3 with the battery charger disconnected. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout the battery service test.
- e. At least once per 60 months perform a battery discharge test during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. This performance discharge test shall be performed in place of the battery service test.

ATTACHMENT TO LICENSE AMENDMENT NO. 139

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 8-13

3/4 8-18

INSERT

3/4 8-13

3/4 8-18

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. The pilot cell specific gravity, corrected to 77°F, and full electrolyte level (fluid at the bottom of the maximum level indication mark), is greater than or equal to 1.200,
 3. The pilot cell voltage is greater than or equal to 2.13 volts, and
 4. The overall battery voltage is greater than or equal to 250 volts.
- b. At least once per 92 days by verifying that:
1. The voltage of each connected cell is greater than or equal to 2.13 volts under float charge.
 2. The specific gravity, corrected to 77°F, and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and
 3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.
- c. At least once per 18 months by verifying that:
1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,
 2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material,
 3. The battery charger will supply at least 140 amperes at greater than or equal to 250 volts for at least 4 hours.
- d. At least once per 18 months, perform a battery service test during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the times specified in Table 4.8-2 with the battery charger disconnected. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout this test.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

3. The pilot cell voltage is greater than or equal to 2.13 volts, and
 4. The overall battery voltage is greater than or equal to 250 volts.
- b. At least once per 92 days by verifying that:
1. The voltage of each connected cell is greater than or equal to 2.13 volts under float charge.
 2. The specific gravity, corrected to 77°F and full electrolyte level (fluid at the bottom of the maximum level indication mark), of each connected cell is greater than or equal to 1.200 and has not decreased more than 0.03 from the value observed during the previous test, and
 3. The electrolyte level of each connected cell is between the top of the minimum level indication mark and the bottom of the maximum level indication mark.
- c. At least once per 18 months by verifying that:
1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration.
 2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.
 3. The battery charger will supply at least 10 amperes at greater than or equal to 250 volts for at least 4 hours.
- d. At least once per 18 months perform a battery service test, during shutdown (MODES 5 or 6), by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status the actual or simulated emergency loads for the times specified of Table 4.8-3 with the battery charger disconnected. The battery terminal voltage shall be maintained greater than or equal to 210 volts throughout the battery service test.
- e. At least once per 60 months perform a battery discharge test during shutdown (MODES 5 or 6), by verifying that the battery capacity is at least 80% of the manufacturer's rating. This performance discharge test shall be performed in place of the battery service test.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 155 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 139 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 January 15, 1991, 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 modify TS 3/4.8.2.3 and TS 3/4.8.2.5 to reflect Regulatory Guide 1.129 by removing the requirement for a differential acceptance test for the DC bus trains (Train AB, Train CD, and Train N) during the 92-day surveillance. In addition, a change to TS 3/4.8.1.1 was proposed to clarify the intent of that specification.

2.0 DISCUSSION

The first change proposes to clarify specification 4.8.1.1.2(e)2 by adding the words "steady state" to the description of the diesel generator voltage surveillance requirement. This change will be evaluated in a separate safety evaluation.

The two remaining changes propose to make identical revisions to the 250 volt battery surveillances. First, the float voltage minimum requirement is proposed to be increased from 2.10 to 2.13 volts. Secondly, that part of the existing surveillance requirement that compares battery cell voltage to original battery acceptance test values is proposed to be deleted. Both of these changes are consistent with Westinghouse Standard TS.

Currently the TS 4.8.2.3.2(b)(1) surveillance requirements for the AB and CD, D.C. bus trains state, in part, the following:

4.8.2.3.2 Each 250-volt battery bank and charger shall be demonstrated OPERABLE

b. At least once per 92 days by verifying that:

1. The voltage of each connected cell is greater than or equal to 2.10 volts under float charge and has not decreased more than 0.05 volts from the value observed during the original acceptance test, and

In the event that a 250-volt D. C. battery and/or its charger fails this surveillance, the battery would be considered inoperable and the action statement would be entered. The TS 3/4.8.2.3 action requires that the battery be restored to operable status within 2 hours or be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

The identical surveillance requirements are stated in TS 4.8.2.5.2(b)(1) for the N D.C. bus train. However, the TS 3/4.8.2.5 action statement requires that, when the Train N battery system is inoperable, the turbine driven auxiliary feedwater pump be declared inoperable and that the TS 3.7.1.2 action statement be followed. This action statement requires that with one auxiliary feedwater pump inoperable, the required auxiliary feedwater pumps be restored to operable status within 72 hours or be in at least hot standby within the next 6 hours and in hot shutdown within the following 6 hours.

The licensee proposed to raise the required voltage of each connected cell from greater than or equal to 2.10 volt to 2.13 volts, and to delete the requirement that the voltage has not decreased more than 0.05 volts from the value observed during the original acceptance test.

3.0 EVALUATION

Regulatory Guide 1.129, "Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," describes an NRC staff approved method for maintaining, testing, and replacing large lead storage batteries for all types of nuclear power plants. This Regulatory Guide states that conformance with the requirements and recommendations that are specified in IEEE Std. 450-1975, "IEEE Recommended Practice for Maintenance, Testing and Replacement of Large Lead Storage Batteries for Generating Stations and Substations," provides an adequate basis for compliance with the regulations in this area. This IEEE standard makes no mention of a 0.05-volt acceptance test as specified in D.C. Cook TS. However, the 1980 and 1987 revisions do specify a float voltage of 2.13 volts, vice the 2.10 volt requirement currently maintained by the TS.

The Westinghouse Standard Technical Specifications do not require the 0.05 volt acceptance criteria but, similar to the IEEE standard, do require a float voltage of 2.13 volts. The Bases of Revision 4 of the Westinghouse Standard TS state that the surveillance requirement for demonstrating the operability of the station batteries is based on the recommendations of Regulatory Guide 1.129, "Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Nuclear Grade Power Plant," February 1978, and IEEE Std. 450-1980, "IEEE Recommended Practice for Maintenance, Testing and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

Discussions with the licensee indicate that the requirement that battery voltage not decrease more than 0.05 volts from the original acceptance test value has been in their specifications since the plant's original custom TS. The specification is assumed to have been obtained from an early vendor technical manual. The licensee's review of the most current manufacturer's Installation and Operating Instructions Manual (C&D Power Systems, #12-800), and IEEE Standards 450-1975, 1980, and 1987, revealed no information which would necessitate maintaining this particular battery voltage comparison surveillance.

In addition, the current Technical Specifications are contradictory. The second surveillance requirement of both TS 3/4.8.2.3 and .5 states:

Each 250-volt battery bank and charger shall be demonstrated OPERABLE

a. At least once per 7 days by verifying that:

3. The pilot cell voltage is greater than or equal to 2.10 volts, and

Consequently, a battery that may pass the weekly surveillance might conceivably fail the 92-day surveillance if it does not meet the 0.05-volt acceptance criteria.

The licensee has proposed to increase the minimum acceptable battery float voltage from 2.10 volts to the IEEE and Standard TS recommended value of 2.13 volts. This change has been proposed for both the 7-day and 92-day surveillance requirements. This change is conservative in that it maintains the batteries at a slightly higher minimum voltage; and is, therefore, considered acceptable to the NRC staff.

Deletion of that portion of the surveillance requirements that compares battery cell voltages to original battery acceptance test values is also considered acceptable because:

- (1) The surveillance requirement minimum cell voltage value has been increased from 2.10 to 2.13 volts;
- (2) The Standard TS, Regulatory Guide 1.129, and current IEEE Standards do not require or recommend that this battery surveillance be performed;
- (3) The TS are currently contradictory in that the 7-day surveillance test does not require a similar acceptance test; and
- (4) This TS has resulted in plant shutdowns in the past, causing unwarranted thermal cycles of the plant.

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

These amendments change 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 or a change in surveillance requirements. The staff has determined that these 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 section 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 amendments.

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. The staff therefore concludes that the proposed changes are acceptable.

Principal Contributors: B. Holian, NRR
T. Colburn, NRR

Date: April 10, 1991