

Docket No.: 50-315

April 7, 1987

Mr. John Dolan, Vice President  
Indiana and Michigan Electric Company  
c/o American Electric Power Service Corporation  
1 Riverside Plaza  
Columbus, Ohio 43216

Dear Mr. Dolan:

The Commission has issued the enclosed Amendment No. 105 to Facility Operating License No. DPR-58 for the Donald C. Cook Nuclear Plant, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated December 5, 1986.

These amendments revise the Technical Specifications to limit the hourly verification of the Quadrant Power Tilt Ratio to twelve hours.

A copy of the related Safety Evaluation is enclosed, which includes the final determination of a no significant hazards consideration. A Notice of Issuance will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,




D. L. Wigginton, Project Manager  
PWR Project Directorate #4  
Division of PWR Licensing-A

Enclosures:

1. Amendment No. 105 to DPR-58
2. Safety Evaluation


cc: w/enclosures  
See next page

**\*SEE PREVIOUS CONCURRENCE**



PWR#4/DPWR-A  
\*DWigginton/mac  
04/01/87

PWR#4/DPWR-A  
\*MDuncan  
04/01/87



PWR#4/DPWR-A  
BJYoungblood  
04/06/87

8704140369 870407  
PDR ADDCK 05000315  
P PDR

Mr. John Dolan  
Indiana and Michigan Electric Company

Donald C. Cook Nuclear Plant

cc:

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Vice President  
Nuclear Operations  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

INDIANA AND MICHIGAN ELECTRIC COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 105  
License No. DPR-58

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Indiana and Michigan Electric Company (the licensee) dated December 5, 1986, 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.105, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.


3. The Technical Specification change is to become effective within 45 days of receipt of this amendment.
4. This license amendment is effective as of the date of its issuance.


FOR THE NUCLEAR REGULATORY COMMISSION

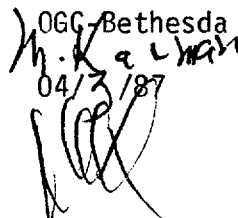
151  
Dave L. Wigginton, Project Manager  
PWR Project Directorate #4  
Division of PWR Licensing-A


Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 7, 1987

  
PWR#4/DPWR-A  
DWigginton/mac  
04/ /87

  
PWR#4/DPWR-A  
MBuncan  
04/ /87

  
OGC Bethesda  
H. K. Chan  
04/3/87

  
PWR#4/DPWR-A  
BJYoungblood  
04/ /87

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO.105 FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Revise Appendix A as follows:

Remove Pages

3/4 2-14  
3/4 2-15

Insert Pages

3/4 2-14  
3/4 2-15

POWER DISTRIBUTION LIMITS

QUADRANT POWER TILT RATIO

LIMITING CONDITION FOR OPERATION

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3.2.4 THE QUADRANT POWER TILT RATIO shall not exceed 1.02.

APPLICABILITY: MODE 1 ABOVE 50% OF RATED THERMAL POWER\*

ACTION:

- a. With the QUADRANT POWER TILT RATIO determined to exceed 1.02 but  $\leq 1.09$ :
  1. Within 2 hours:
    - a) Either reduce the QUADRANT POWER TILT RATIO to within its limit, or
    - b) Reduce THERMAL POWER at least 3% from RATED THERMAL POWER for each 1% of indicated QUADRANT POWER TILT RATIO in excess of 1.0 and similarly reduce the Power Range Neutron Flux-High Trip Setpoints within the next 4 hours.
  2. Verify that the QUADRANT POWER TILT RATIO is within its limit within 24 hours after exceeding the limit or reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within the next 2 hours and reduce the Power Range Neutron Flux-High Trip setpoints to  $\leq 55\%$  of RATED THERMAL POWER within the next 4 hours.
  3. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER; subsequent POWER OPERATION above 50% of RATED THERMAL POWER may proceed provided that the QUADRANT POWER TILT RATIO is verified within its limit at least once per hour for 12 hours or until verified acceptable at 95% or greater RATED THERMAL POWER.
- b. With the QUADRANT POWER TILT RATIO determined to exceed 1.09 due to misalignment of either a shutdown or control rod:
  1. Reduce THERMAL POWER at least 3% from RATED THERMAL POWER for each 1% of indicated QUADRANT POWER TILT RATIO in excess of 1.0, within 30 minutes.
  2. Verify that the QUADRANT POWER TILT RATIO is within its limit within 2 hours after exceeding the limit or

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\*See Special Test Exception 3.10.2

## POWER DISTRIBUTION

### LIMITING CONDITION FOR OPERATION (Continued)

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reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within the next 2 hours and reduce the Power Range Neutron Flux-High Trip Setpoints to  $\leq 55\%$  of RATED THERMAL POWER within the next 4 hours.

3. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER; subsequent POWER OPERATION above 50% of RATED THERMAL POWER may proceed providing that the QUADRANT POWER TILT RATIO is verified within its limit at least once per hour for 12 hours or until verified acceptable at 95% of greater RATED THERMAL POWER.
- c. With the QUADRANT POWER TILT RATIO determined to exceed 1.09 due to causes other than the misalignment of either a shutdown or control rod:
  1. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 2 hours and reduce the Power Range Neutron Flux-High Trip Setpoints to  $\leq 55\%$  of RATED THERMAL POWER within the next 4 hours.
  2. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER; subsequent POWER OPERATION above 50% of RATED THERMAL POWER may proceed provided that the QUADRANT POWER TILT RATIO is verified within its limit at least once per hour for 12 hours or until verified at 95% or greater RATED THERMAL POWER.

### SURVEILLANCE REQUIREMENTS

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4.2.4 The QUADRANT POWER TILT RATIO shall be determined to be within the limit above 50% of RATED THERMAL POWER by:

- a. Calculating the ratio at least once per 7 days when the alarm is OPERABLE.
- b. Calculating the ratio at least once per 12 hours during steady state operation when the alarm is inoperable.
- c. Using the movable incore detectors to determine the QUADRANT POWER TILT RATIO at least once per 12 hours when one Power Range Channel is inoperable and THERMAL POWER is  $> 75$  percent of RATED THERMAL POWER.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 105 TO FACILITY OPERATING LICENSE NO. DPR-58

INDIANA AND MICHIGAN ELECTRIC COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-315

INTRODUCTION

By letter dated December 5, 1986, the Indiana and Michigan Electric Company (the licensee) submitted a proposed license amendment to the facility operating license for the Donald C. Cook Nuclear Plant, Unit No. 1. The proposal was to limit the hourly verification of the Quadrant Power Tilt Ratio to twelve hours.

EVALUATION

The current technical specifications require the Quadrant Power Tilt Ratio (QPTR) to be verified within its limit at least once per hour until verified acceptable at 95% or greater rated thermal power. The Unit 2 technical specifications limit the hourly testing for 12 hours; this change would make the units alike without having to be at 95% power.

We have reviewed the licensee's submittal and agree that verifying the QPTR is within its limit once per hour for 12 hours is sufficient to ensure that an undesirable QPTR no longer exists and that the power does not have to be greater than 95% to do this verification. This change will bring D. C. Cook Unit 1 Technical Specifications into agreement with those of Unit 2 and the Standard Technical Specifications. Thus, we find the proposed change acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of the facilities' components located within the restricted areas as defined in 10 CFR 20. The staff has determined that the amendment involves 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 determined that the amendment involves no significant hazards consideration. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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 amendment.



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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: D. Wigginton  
M. Chatterton

Dated: April 7, 1987

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AMENDMENT NO. 105 TO FACILITY OPERATING LICENSE NO. DPR-58 - DONALD C. COOK, UNIT 1

DISTRIBUTION: w/enclosures

Docket File

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