

MAY 26 1987

Docket Nos. 50-315
and 50-316

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:

SUBJECT: EXEMPTION FROM CERTAIN REQUIREMENTS OF 10 CFR PART 50, APPENDIX R,
SECTION III J - DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2

The Commission has issued the enclosed Exemption to Appendix R of 10 CFR Part 50 in response to the Indiana and Michigan Electric Company submittal dated March 6, 1987. The exemption allows the security diesel generator lighting alternative to the 8-hour battery powered lighting system in the outdoor yard area.

The basis for the Exemption is contained in the enclosed Exemption and in the staff Safety Evaluation which is also enclosed. The Exemption is being forwarded to the Office of the Federal Register for publication.

Sincerely,

LSJ

David L. Wigginton, Acting Project Director
Project Directorate III-3
Division of Reactor Projects

Enclosures:

- 1. Exemption
- 2. Safety Evaluation

cc: See next page

*SEE PREVIOUS CONCURRENCE

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Donald C. Cook Nuclear Plant

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	Docket Nos. 50-315
Indiana and Michigan Electric)	and 50-316
Company)	
Donald C. Cook Nuclear Plant)	
Units 1 and 2)	

EXEMPTION

I.

The Indiana and Michigan Electric Company (IMEC, the licensee) is the holder of Facility Operating License Nos. DPR-58 and DPR-74, which authorize operation of Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2 (the facilities), at a steady-state power level not to exceed 3250 and 3411 megawatts thermal, respectively. The facilities are pressurized water reactors (PWR) located in Berrien County, Michigan. These licenses provide, among other things, that the facilities are subject to all rules, regulations, and Orders of the Commission now or hereafter in effect.

II.

On November 19, 1980, the Commission published a revised Section 50.48 and a new Appendix R to 10 CFR Part 50 regarding fire protection features of nuclear power plants. The revised Section 50.48 and Appendix R became effective on February 17, 1981. Section III of Appendix R contains 15 subsections lettered A through O, each of which specifies requirements for a particular aspect of the fire protection features at a nuclear power plant.

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One of the subsections, III.J, is the subject of the licensee's exemption request. Section III.J, requires that emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.

III.

By letter dated March 6, 1987, the licensee submitted a request for exemption from the technical requirements of Section III.J of Appendix R to 10 CFR Part 50. For safe shutdown of the facilities in the event of a fire, it may become necessary for plant personnel to control steam generator power-operated relief valves. In the shutdown procedures, the back-up manual operation of these valves must be accomplished from nitrogen regulator valves located in the outdoor yard area. This area does not have emergency power with at least an 8-hour battery power supply but is in an area with normal and plant outdoor lighting backed up by a 500 kW security diesel generator. In the event of a station blackout or loss of lighting in the yard area, the security diesel generator provides the lighting for security measures and, in so doing, also lights the area for manual operation of the nitrogen regulator valves.

The licensee's request is for an exemption to the requirement of Section III.J of Appendix R to provide lighting in the outdoor area powered from an 8-hour battery power supply. The underlying purpose of the rule is to provide a separate lighting system not interrupted by fires for areas needed for operation of safe shutdown equipment and in access and egress routes to the equipment.

The licensees' request will provide an alternative to the 8-hour battery power supply.

The 500 kW security diesel generator is controlled by circuitry and associated cables located outside the plant area that would be affected by a fire that would require activation of the safe shutdown fire procedures. The diesel is run- and load-tested monthly and receives biannual preventive maintenance. In the event of a plant fire, the normal outdoor lighting also on separate circuits should not be affected. Should a station blackout occur or the normal outdoor lighting fail concurrent with the fire, the security diesel generators are started and provide continued emergency security measures, including outdoor lighting, for the yard area. Since the normal and emergency power sources are located outside the plant, the installation of 8-hour battery powered lighting units would not significantly improve the level of protection in this area.

Based on the above evaluation, the staff concludes that the installation of an 8-hour battery powered lighting system in the yard area would not significantly improve emergency lighting and that the emergency security diesel lighting provides an acceptable alternative for the purpose of the rule.

IV.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), that (1) the exemption as described in Section III is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security; and (2) special circumstances

are present for the exemption in that application of the regulation in this particular circumstance is not necessary to achieve the underlying purposes of Appendix R to 10 CFR Part 50. Therefore, the Commission grants the exemption from the requirements of Section III.J of Appendix R to 10 CFR Part 50 to the extent discussed in Section III above.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will have no significant impact on the environment (April 3, 1987, 52 FR 10833).

This Exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Gary M. Holahan, Acting Director
Division of Reactor Projects III, IV, V
& Special Projects
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland this 26th day of May, 1987.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

INDIANA AND MICHIGAN ELECTRIC COMPANY

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

DOCKET NOS. 50-315 AND 50-316

EXEMPTION FROM SECTION III.J OF APPENDIX R

INTRODUCTION

By letter dated March 6, 1987, Indiana and Michigan Electric Company (IMEC), the licensee for Donald C. Cook Nuclear Plant, Units 1 and 2, requested approval of an exemption from the technical requirements of Section III.J of Appendix R to 10 CFR Part 50. The exemption concerns the need for 8-hour battery powered lighting units in an outdoor yard area needed for operation of safe shutdown equipment and along the access route to the yard area. The staff's evaluation of the licensee's request is provided below.

DISCUSSION

The reason for requiring 8-hour battery powered emergency lighting is to ensure that at least minimal lighting is available for the performance of manual actions necessary for safe shutdown after a fire. Usually, manual actions are required for valve alignments, or other control operations. For example, the nitrogen regulator valves which are located in an outdoor yard area provide the backup means for actuation of the steam generator power-operated relief valves during the shutdown procedures.

The licensee requested the proposed exemption for postulated fires which would cause the loss of monitoring capability at the shutdown panel and in the control room, which would necessitate accessing the nitrogen regulator valves. The licensee's justification for the exemption is based on the availability of the normal outdoor lighting and security systems. The outdoor lighting is powered from a backup 500 kW security diesel generator located outside the plant. Further, the licensee has stated that the circuit for the security diesel will not be affected by any fire in the plant. This will provide a level of emergency lighting equivalent to that required by Section III.J of Appendix R for the above area.

EVALUATION

The technical requirements of Section III.J of Appendix R are not expressly met in the outdoor yard area where the nitrogen regulator relief valves are located, in that individual 8-hour battery powered lighting units are not provided for safe shutdown.

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With respect to the nitrogen regulator relief valves, the staff was concerned about the availability of a reliable means of illumination. The licensee has stated that the normal outdoor lighting and security systems would not be affected by a fire inside the D. C. Cook plant. The circuits and associated cables for the security diesel are located outside the plant. The security diesel generator is run- and load-tested monthly, and receives biannual preventive maintenance. Since both the normal outdoor lighting systems and an emergency power source are located outside the plant, the installation of 8-hour battery powered lighting units would not significantly improve the level of protection in this area.

CONCLUSION

Based on the foregoing discussion of alternative methods of providing emergency lighting, the staff concludes that adequate lighting will prevail to access the yard areas in question and perform the necessary safe shutdown functions. Therefore, the licensee's request for exemption from the requirements of Section III.J of Appendix R for access to the nitrogen regulatory relief valves is acceptable and should be granted. Further, the staff concludes that the installation of 8-hour battery powered emergency lighting units in the outdoor area adjacent to the nitrogen regulator relief valves would not significantly improve the level of protection for this area. Therefore, their omission is an acceptable exemption from Section III.J of Appendix R.

Principal Contributor: Amarjit Singh

Date: May 26, 1987.