



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

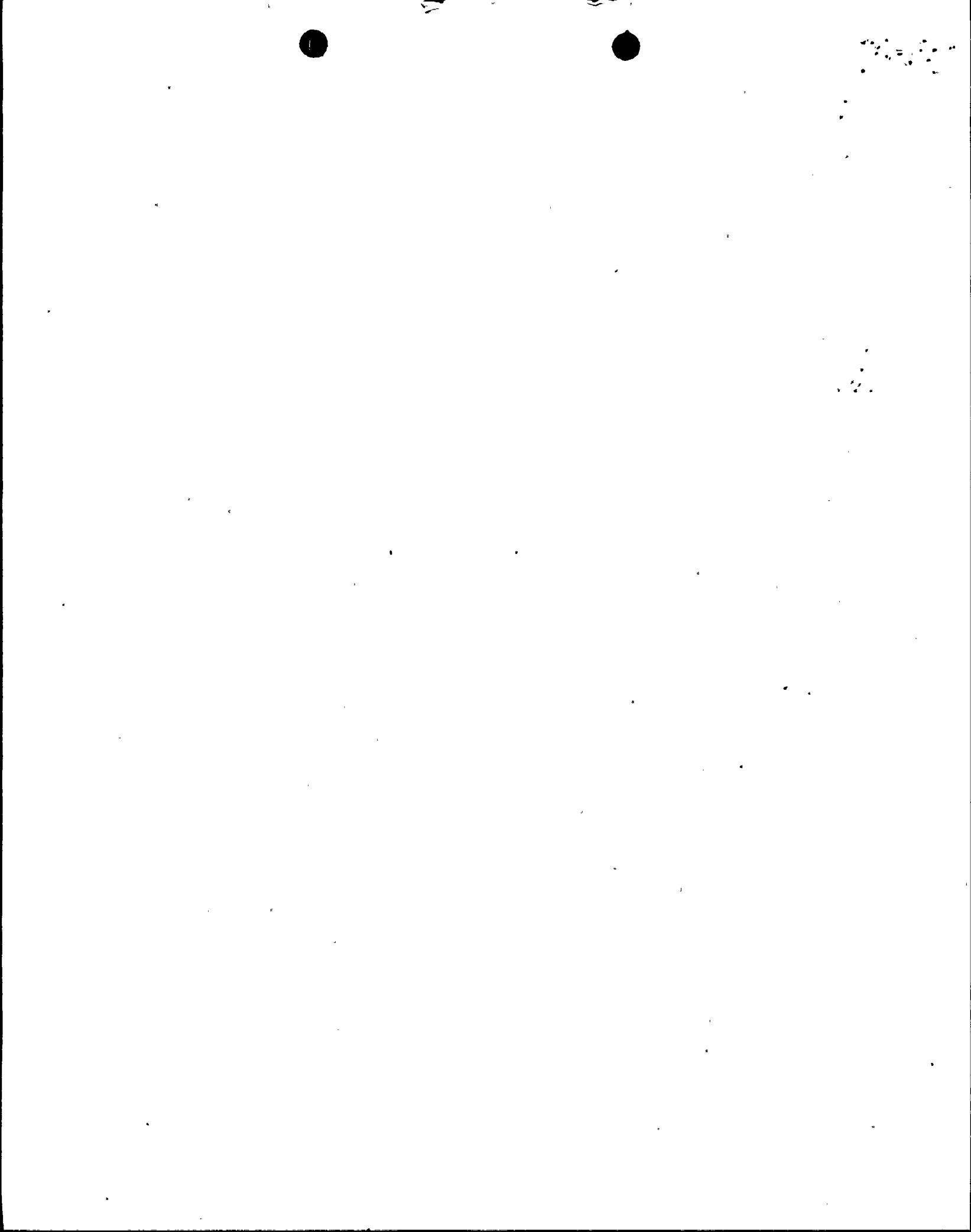
The reason for requiring 8-hour battery powered emergency lighting is to ensure that at least minimal lighting is available for the performance of manual actions necessary for safe shutdown after a fire. Usually, manual actions are required for valve alignments, or other control operations. For example, 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.

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Date: May 26, 1987.

