

July 1, 1985

Docket No. 50-331

Mr. Lee Liu
Chairman of the Board and
Chief Executive Officer
Iowa Electric Light and Power Company
Post Office Box 351
Cedar Rapids, Iowa 52406

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Dear Mr. Liu:

SUBJECT: EXEMPTION REQUESTS - 10 CFR 50.48 FIRE PROTECTION
AND APPENDIX R TO 10 CFR PART 50

Re: Duane Arnold Energy Center

The Commission has issued the enclosed Exemption (Enclosure 1) from certain requirements of Section 50.48 and Section III J of Appendix P to 10 CFR Part 50 for the Duane Arnold Energy Center. This action is in response to your request submitted by letter dated January 2, 1985.

A copy of the Exemption is being filed with the Office of the Federal Register for publication.

The bases of our findings are stated in the enclosed Safety Evaluation (Enclosure 2).

Sincerely,

Original signed by/

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Enclosures:
As stated

cc w/enclosures:
See next page

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*Please see previous concurrence page.

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Mr. Lee Liu
Iowa Electric Light and Power Company
Duane Arnold Energy Center

cc:

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James G. Keppler
Regional Radiation Representative
Region III Office
U. S. Nuclear Regulatory Commission
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Glen Ellyn, Illinois 60137

requires that emergency lighting units with at least an 8-hour battery power supply shall be provided for all areas needed for operation of safe shutdown equipment. The objective of this requirement is that in the event of a fire, adequate lighting will be available to assure that the plant can be safely shutdown. As a result of its internal review, the licensee found that it could not assure that a battery power source for the control room lighting would be available for more than 90 minutes. The licensee has therefore requested an exemption from the literal requirements of Section III.J, and wishes to use 90-minute batteries backed by Division I and Division II diesels in lieu of the 8-hour battery requirements of Section III.J for the control room. The diesel generators will power the emergency lighting after the battery power is exhausted. Half the essential lighting in the control room will be powered by the Division I diesel generator and lighting distribution system and half by Division II. There is no single fire outside the control room that can disable both Division I and Division II lighting in the control room.

Based on its review of the above information, the staff has concluded that, in the event of a fire, the 90-minute batteries will provide sufficient illumination in the control room to enable the operators to shut the plant down. Beyond the 90 minutes, either or both the Division I and Division II diesel generators will continue to power sufficient control room lighting for more than 8 hours. The underlying purpose of Section III.J will, therefore, be served by operating in the proposed manner. Therefore, the exemption request to Section III.J of Appendix R should be granted.

III.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, an exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest.

Therefore, the Commission hereby approves (to the extent indicated) the following exemption:

Exemption is granted from the requirements of Section III.J of Appendix R to 10 CFR 50 pertaining to the need for providing emergency lighting with at least an 8-hour battery power supply for powering control room essential lighting.

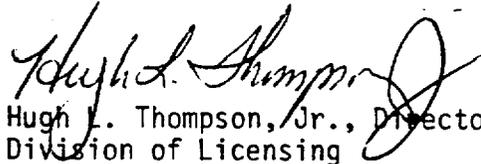
The proposed use of emergency diesel-backed power sources in lieu of an 8-hour battery power supply, as cited in Section II above, is acceptable.

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of this Exemption will have no significant impact on the environment (50 FR 20682).

A copy of the Safety Evaluation associated with this action is available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the local public document room located at the Cedar Rapids Public Library, 500 First Street, S. E., Cedar Rapids, Iowa 52401. A copy may be obtained upon request when addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

The Exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Hugh L. Thompson, Jr., Director
Division of Licensing
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland
this 1st day of July, 1985.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

EXEMPTION FROM SECTION III.J. OF APPENDIX R

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

1.0 INTRODUCTION

Section III.J. of 10 CFR 50, Appendix R 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. In a letter dated March 19, 1981, the Iowa Electric Light and Power Company (the licensee) responded to the requirements of Appendix R, Section III.J, by stating that "emergency lighting equipment installed in response to earlier requirements meets the requirements of Section III.J to provide 8-hour battery lighting capability." Subsequently, as a result of its internal review of its compliance with Sections III.G and III.J. of Appendix R, the licensee found that it could not assure an 8-hour battery source of control room lighting. The licensee, by a letter dated January 2, 1985, proposed to power the control room (CR) lighting fixtures diversely from Division I and Division II buses powered by emergency diesels which have a fuel capacity in excess of 8 hours. The licensee has also summarized several changes which fall into six categories consisting of alternate shutdown control, suppression, detection, raceway wrapping, fire barriers, and procedural changes. These changes have also resulted from the licensee's internal reviews of the designs and implementation of the modifications for Appendix R, and will be the subject of a separate action.

2.0 EVALUATION

Section III.J. of Appendix R, requires that emergency lighting units with at least an 8-hour battery power supply shall be provided for all areas needed for operation of safe shutdown equipment. The objective of this requirement is that in the event of a fire, adequate control room lighting will be available to assure that the plant can be safely shutdown. As a result of its internal review, the licensee found that it could not assure that a battery power source would be available for lighting for more than 90 minutes. The licensee has therefore requested an exemption from the literal requirements of Section III.J, and wishes to use 90-minute batteries backed by Division I and Division II diesels in lieu of the 8-hour battery requirements of Section III.J. The diesel generators will continue to power the emergency lighting after the battery power is exhausted. If a fire has

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disabled the Division II bus, the remaining Division I lighting would provide adequate illumination at the control room work stations.

Based on its review of the above information, the staff has concluded that, in the event of a fire, the 90-minute batteries will provide sufficient illumination in the control room to enable the operators to shut the plant down. Beyond the 90 minutes, the Division I and Division II diesel generators or just the Division I diesel generator will continue to power the control room lighting for more than 8 hours. The underlying purpose of Section III.J will, therefore, be served by operating in the proposed manner. Therefore, the exemption request to Section III.J of Appendix R should be granted. An exemption from the requirements of Section III.J was previously granted for Trojan Nuclear Plant.

3.0 CONCLUSIONS

Based on the above evaluations, we conclude that the licensee has adequately shown that sufficient illumination will be provided in the control room when diesel generator powered Division I and II or Division I only power sources are used. Therefore, the request for exemption from Section III.J. of Appendix R can be approved.

Principal Contributors: J. Holonich and J. Wilson

Dated: July 1, 1985

III.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, an exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest.

Therefore, the Commission hereby approves (to the extent indicated) the following exemption:

Exemption is granted from the requirements of Section III.J of Appendix R to 10 CFR 50 pertaining to the need for providing emergency lighting with at least an 8-hour battery power supply for powering control room essential lighting.

The proposed use of emergency diesel-backed power sources in lieu of an 8-hour battery power supply, as cited in Section II above, is acceptable.

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