

May 30, 1985

Docket No. 50-331

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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

Dear Mr. Liu:

SUBJECT: EXEMPTION FOR SCHEDULE FOR INSTALLATION  
OF ALTERNATIVE SHUTDOWN CAPABILITY

Re: Duane Arnold Energy Center

The Commission has issued the enclosed Exemption from the requirement of 10 CFR 50.48(c)(4) which sets the schedule for installation of alternative shutdown capability. The Exemption extends the deadline for completion of alternative shutdown capability at the Duane Arnold Energy Center until the startup of Cycle 9 (estimated March 1987).

The Exemption is being forwarded to the Office of the Federal Register for publication.

Sincerely,

Original signed by/

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

Enclosure:  
Exemption

cc w/enclosure:  
See next page

	(Previously concurred)	
DL:ORB#2	DL:ORB#2	DSI:ASB
SNorris:ajs	MThadani (s)	OParr (s)
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RBernero  
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TWambach  
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*[Handwritten initials]*  
W. Shields  
5/22/85

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

cc:

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- (1) The first refueling outage;
- (2) A planned outage lasting 60 days or more; or
- (3) An unplanned outage lasting 120 days or more.

By letter dated January 3, 1983, the NRC staff transmitted a Safety Evaluation to the licensee which concluded that alternative shutdown capability met the requirements of Sections III.G.3 of Appendix R to 10 CFR 50 in the areas of the control room complex, control building heating, ventilating and air conditioning (HVAC) room, and the HVAC heat exchanger and chiller area at the Duane Arnold Energy Center (DAEC) and approved the licensee's conceptual design of the Alternate Shutdown Capability (ASC).

Currently, DAEC is in a refueling outage to make the modifications for the ASC approved in our January 3, 1983 Safety Evaluation. As a result of the evaluation of the fire protection modifications against the requirements of 10 CFR 50 Appendix R, the licensee found that fire could cause control power fuses to blow at the motor control center prior to transferring control to the Alternate Shutdown System. This would require the fuses to be replaced prior to operating the associated shutdown equipment. However, replacement of fuses during a hot shutdown maintenance is prohibited by 10 CFR 50, Appendix R. Therefore, by a letter dated April 5, 1985, the licensee stated that, currently, the DAEC ASC provides automatic backup fusing for two transfer functions: Main Steam Isolation Valve Control and Safety/Relief Valve Manual Control. This design allows the DAEC to achieve hot shutdown for a short period of time without

replacing any control power fuses which may be blown as a result of a Control Room fire. However, a source of makeup water to the Reactor Pressure Vessel is required within a few minutes to maintain hot shutdown and the current design does not provide automatic backup fuses for the water makeup systems.

At this time, ASC procedures are being written by the licensee to direct operators to replace control power fuses if an item of ASC equipment fails to function after control is transferred away from the control room.

A complete supply of replacement fuses will be stored at the main ASC panel for ready access. However, the licensee intends to modify the ASC system so that the DAEC can achieve and maintain hot shutdown without replacing control power fuses. This effort will involve adding automatic backup fuses to five transfer circuits: the Division II Core Spray pump and four motor-operated valves.

Because this problem was recently identified, the licensee has determined that it will not be possible to incorporate these modifications into the ASC during the current refueling outage which is scheduled to end in late May 1985. The design effort is considerable and requires the same engineers who are now dedicated to the installation of the present Alternate Shutdown Capability. The licensee has estimated that the procurement time for the transfer switches is approximately one year and that these modifications can be made most effectively during the Cycle 9 refueling outage.

The licensee has, therefore, requested an exemption from Section III.G.1 of Appendix R to allow the DAEC to operate for one fuel cycle (Cycle 8) with the currently designed ASC which may require the replacement of certain control power fuses to maintain hot shutdown as described above. The licensee states that it is highly unlikely that a control room fire would cause the failure of all fuses required to maintain hot shutdown. The licensee has committed to write procedures to replace blown fuses, if required, and to assure that replacement fuses will be immediately available to operators.

Based on the above, the staff has concluded that the licensee has provided acceptable interim post-fire shutdown capability to support the requested schedular exemption. Therefore, the staff has concluded that schedular exemption should be granted.

### III.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), the exemption requested by the licensee's letter of April 5, 1985, is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest. The Commission hereby grants to the licensee an exemption from the requirements of 10 CFR 50.48(c)(4) to extend the deadline for completion of alternative shutdown capability at the Duane Arnold Energy Center until the startup of Cycle 9 (estimated March 1987).

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of the exemption will have no significant impact on the environment (50 FR 20862).

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "H.R. Denton".

Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland  
this 30th day of May, 1985.