

UNITED STATES NUCLEAR REGULATORY COMMISSION
COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2
DOCKET NOS. 50-254 AND 50-265
ENVIRONMENTAL ASSESSMENT
AND FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of exemptions from the requirements of 10 CFR, Part 50, Appendix R, to Commonwealth Edison Company (CECo, the licensee), for operation of the Quad Cities Nuclear Power Station, Units 1 and 2, located in Rock Island County, Illinois.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action

The proposed action would grant several specific plant exemptions from certain requirements of "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979" prescribed in Appendix R to 10 CFR Part 50. These requirements are: (1) that the plant be able to achieve hot shutdown without performing repairs; (2) that cable and equipment and associated non-safety circuits of redundant trains be separated by a horizontal distance of more than 20 feet (Section II.G.2.b of Appendix R); and (3) that emergency lighting with an 8-hour battery power supply be provided in areas needed for safe shutdown (Section III.J).

The proposed action is in accordance with the licensee's request for exemptions dated September 30, 1987, October 1, 1987, November 23, 1987, and April 11, 1990.

In addition, the proposed action would change the combustible load limits in the Exemption that was granted on August 18, 1989.

The Need for the Proposed Action

Since it is not possible to predict all conditions or plant configurations under which a fire can occur and propagate, the Appendix R rule only prescribes general fire protective measures. As such, there will be instances where plant specific configurations or system features could safely allow for different protection from fire damage than specified in the rule.

For these situations, strict compliance may not be required to meet the underlying purpose of the rule. Whereupon, for special circumstances identified in Section 50.12, the licensee can be permitted to forego unnecessary plant modifications. For the particular instances in this proposed action, the licensee has demonstrated, by detailed fire hazards analysis, that existing protection and/or other proposed modifications will provide a level of safety for certain plant areas and zones which is equivalent to the technical requirements in Appendix R.

Environmental Impact of the Proposed Action

The proposed exemptions are intended to provide a level of safety equivalent to the technical requirements of Appendix R. These exemptions will not change the types, or allow an increase in the amounts, of effluents that may be released offsite. Nor would they result in an increase in individual or cumulative occupational radiation exposure. Therefore, the Commission concludes that there are no significant radiological environmental impacts associated with the proposed exemptions.

With regard to potential nonradiological impacts, the proposed exemptions involve features located entirely within the restricted areas as defined in 10 CFR 20. They do not affect nonradiological plant effluents and have no

other environmental impact. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed exemptions.

Alternative to the Proposed Action

Since the Commission has concluded there are no measurable environmental impacts associated with the proposed exemptions, any alternatives with equal or greater environmental impact need not be evaluated. The principal alternative to the exemptions would be to require rigid compliance with the requirements of Appendix R of 10 CFR 50. Such action would not enhance the protection of the environment and would result in unwarranted licensee expenditures of engineering and construction resources, as well as associated capital costs.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the Final Environmental Statement (construction permit and operating license) for Quad Cities Nuclear Power Station, Units 1 and 2, dated September 1972.

Agencies and Persons Consulted

The NRC staff reviewed the licensee's request and did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

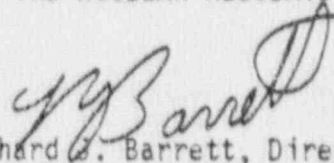
The Commission has determined not to prepare an environmental impact statement for the proposed exemptions.

Based upon the foregoing environmental assessment, the Commission concludes that the proposed actions will not have a significant effect on the quality of the human environment.

For further details with respect to this action, see the licensee's letters dated September 30, 1987, October 1, 1987, November 23, 1987 and April 11, 1990. These letters are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C., and at the Dixon Public Library, 221 Hennepin Avenue, Dixon, Illinois 61021.

Dated at Rockville, Maryland, this 21st day of February, 1991.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard G. Barrett, Director
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Office of Nuclear Reactor Regulation