May 21, 1991

Docket Nos. 50-254
and 50-265

Mr. Thomas J. Kovach
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Dear Mr. Kovach:

SUBJECT: EXEMPTION FROM REQUIREMENTS OF APPENDIX R TO 10 CFR PART 50 (TAC NOS. 67014, 67015, 76510, AND 76511)

The Commission has issued the enclosed Exemption from certain requirements of Appendix R to 10 CFR Part 50. This action is in response to your letters of September 30, October 1, November 23, 1987, and April 11, 1990.

Your letters of September 30, October 1 and November 23, 1987, requested four exemptions from the technical requirements of Appendix R. Your letter of April 11, 1990, requested modifications in combustible loadings that were previously approved by the staff in the Exemption granted on August 18, 1989.

The staff's safety evaluation of your requested exemptions was sent to you on February 25, 1991. A copy of the "Environmental Assessment and Finding of No Significant Impact" regarding the requested exemptions was published in the Federal Register on February 28, 1991 (56 FR 8371). We have granted your request for Exemption from the requirements of 10 CFR Part 50, Appendix R.

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

Sincerely,

Original Signed By:

Richard J. Barrett, Director
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosure:
Exemption

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Mr. Thomas J. Kovach
Commonwealth Edison Company

Quad Cities Nuclear Power Station
Unit Nos. 1 and 2

cc:

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
COMMONWEALTH EDISON COMPANY	)	Docket Nos. 50-254 and 50-265
	)	
(Quad Cities Nuclear Power Station, Units 1 and 2)	)	
	)	

EXEMPTION

I.

The Commonwealth Edison Company (CECo, the licensee) is the holder of Operating License No. DPR-29, which authorizes operation of Quad Cities Nuclear Power Station (QCNPS) Unit 1, and Operating License No. DPR-30, which authorizes operation of QCNPS Unit 2. These licenses provide, among other things, that QCNPS Units 1 and 2 are subject to all rules, regulations, and Orders of the Commission now or hereafter in effect.

The station is composed of two boiling water reactors at the licensee's site located in Rock Island County, Illinois.

II.

On November 19, 1980, the Commission published revised 10 CFR 50.48, "Fire Protection," and a new Appendix R to 10 CFR Part 50, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," regarding fire protection features of nuclear power plants required to satisfy the general design criterion related to fire protection (Criterion 3, Appendix A to 10 CFR Part 50). The revised 10 CFR 50.48 and Appendix R to

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10 CFR Part 50 (Appendix R) became effective on February 17, 1981. Section III of Appendix R contains 15 subsections, lettered A through O, each of which specified requirements for a particular aspect of the fire protection features at a nuclear power plant. Two of these sections, III.G, "Fire Protection of Safe Shutdown Capability," and III.J, "Emergency Lighting," were included in the licensee's exemption requests.

III.

By letter dated September 30, 1987, the licensee requested exemptions from the requirements of Appendix R for separation of redundant reactor vessel pressure and level indicating instruments in the Unit 1 reactor building and separation of redundant suppression pool level indicating instruments in the Unit 1 and Unit 2 reactor buildings.

By letter dated October 1, 1987, the licensee supplemented its September 30, 1987 submittal by making a request for two additional exemptions from the requirements of Appendix R. These additional exemption requests concerned lack of emergency lighting for the suppression pool level instrumentation and the need to pull fuses to preclude spurious component operation in order to achieve stable hot shutdown.

By letter dated November 23, 1987, the licensee revised the October 1, 1987 submittal. In its new submittal, the licensee deleted the exemption pertaining to the separation of redundant reactor pressure indication. The licensee also modified some of the wording related to emergency lighting and penetration seals.

By letter dated April 11, 1990, the licensee requested modifications in combustible loading definitions used in exemption requests submitted to the NRC on June 25, 1986. The original exemption requests were evaluated by the staff and approved in the Exemption dated August 18, 1989.

The following list briefly describes the exemptions from Appendix R requested by the licensee. Details of these exemption requests and the staff's evaluation are contained in the previously mentioned letters from the licensee and the letter to the licensee dated February 25, 1991, which are located in the Public Document Room.

1. Exemptions from the technical requirements of Section III.G.2.b of Appendix R to the extent that 20 feet of horizontal space free of intervening combustibles and area-wide suppression is not provided within the fire area containing redundant reactor vessel level indicating instrumentation for each unit.

2. An exemption from Section III.G.2.b of Appendix R for lack of adequate separation between redundant suppression pool level indicators for Fire Areas RB-1 and RB-2 in Units 1 and 2, respectively. In addition, detection and suppression are not provided.

3. An exemption from Section III.J of Appendix R to the extent that emergency lights are not provided for the suppression pool level sight glasses for Unit 1 and Unit 2.

4. An exemption from the requirements of Appendix R to the extent that fuse pulling, which could constitute a "repair," is required to prevent spurious equipment operation during hot shutdown.

5. A modification to exemption requests previously approved by the NRC by safety evaluation (SE) dated July 21, 1988. The licensee has requested that combustible loading values identified in the original request for exemption submittal dated June 25, 1986, be modified.

IV.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a)(1), these exemptions (listed above) are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(ii), are present to justify granting the exemptions; namely, that application of the regulation in these particular circumstances is not necessary to achieve the underlying purpose of the rule. The special circumstances of each CECo exemption request was reviewed in detail by the staff's SE dated February 25, 1991. In general, the underlying purpose of the rule is to accomplish safe shutdown in the event of a single fire and to maintain the plant in a safe shutdown condition. These goals are achieved by assuring that sufficient undamaged equipment is available to support safe shutdown in the event of a fire within the area of concern. In the areas for which an exemption is being requested, passive as well as active fire protection features assure that any single fire will not result in the loss of safe shutdown capability. These features include manual actions, automatic suppression, and early detection of fires in their incipient stages. The fire protection features, in conjunction with low combustible loadings, provide a high degree of assurance that a single fire will not result in a

loss of safe shutdown capability. In addition, the special circumstances of 10 CFR 50.12(a)(2)(iii) apply in that compliance would result in costs that significantly exceed those contemplated when the regulation was adopted. Providing additional protection features, as would be required to meet the regulations, would not result in a significant increase in the level of protection and would result in undue costs and resource expenditures for the licensee in additional engineering, procurement of materials, fabrication, and installation. Accordingly, the Commission hereby grants exemptions for the conditions listed 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 quality of the human environment (56 FR 8371).

This Exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bruce A. Boger

Bruce A. Boger, Director
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland
this 21st day of May 1991