

Distribution:

Docket 50-293

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ACRS (10)

Docket No. 50-293

JUL 14 1988

Mr. Ralph Bird  
Senior Vice President - Nuclear  
Pilgrim Nuclear Power Station  
Boston Edison Company  
RFD #1, Rocky Hill Road  
Plymouth, Massachusetts 02360

Dear Mr. Bird:

SUBJECT: ENVIRONMENTAL ASSESSMENT OF TECHNICAL EXEMPTION REQUEST RELATING TO  
10 CFR 50, APPENDIX R, REQUIREMENTS FOR PILGRIM NUCLEAR POWER STATION

REFERENCE: TAC NO. 65962

Enclosed is a copy of a "Notice of Environmental Assessment and Finding of No Significant Impact" for your information. This notice relates to your request dated August 10, 1987.

The licensee's request is for an exemption from the provisions of Section III G of Appendix R to 10 Part CFR 50, which identifies the fire protection requirements to be provided for structures, systems and components important to safe shutdown capability. The request (Exemption Request Nos. 15, 18 and 22) covered several different areas of the Pilgrim plant. The request included exemptions from: the requirement to install full area fire detection and automatic suppression in specific areas of the Radwaste and Control Building which have redundant safe shutdown cables; the requirement that no intervening combustible be present between two redundant safe shutdown systems located in the same fire area (specific areas); and the requirement for fire detection and automatic fire suppression for Torus Water Level indication instruments and cable located in the Reactor Building.

This notice has been forwarded to the Office of the Federal Register for publication.

Sincerely,

15/

Daniel McDonald, Senior Project Manager  
Project Directorate I-3  
Division of Reactor Projects I/II

Enclosure:  
As stated

cc w/enclosure:  
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\*See previous concurrence

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NAME	:MRushbrook	:DMcDonald:ck:GBerry	:RWessman	:	:	:	:
DATE	:6/23/88	:6/24/88	:6/30/88	:6/13/88	:	:	:

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Daniel McDonald, Senior Project Manager  
Project Directorate I-3  
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Enclosure:  
As stated

cc w/enclosure:  
See next page

OFC	:PDI-3	:PDI-3	:OGC	:PDI-3/DIR	:	:
NAME	:MRusbrook	:DMcDonald:ck:	:Gibney	:RWessman	:	:
DATE	:6/2/88	:6/2/88	:6/2/88	:6/ /88	:	:

Docket No. 50-293

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Boston Edison Company  
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Sincerely,

Daniel McDonald, Senior Project Manager  
Project Directorate I-3  
Division of Reactor Projects I/II

Enclosure:  
As stated

cc w/enclosure:  
See next page

OFC	:PDI-3	:PDI-3	:OGC	:PDI-3/DIR	:	:
NAME	:MRushbrook	:DMcDonald:ck:		:RWessman	:	:
DATE	:6/27/88	:6/ /88	:6/ /88	:6/ /88	:	:

UNITED STATES NUCLEAR REGULATORY COMMISSIONBOSTON EDISON COMPANYDOCKET NO. 50-293ENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of exemptions from certain requirements of 10 CFR Part 50, Appendix R, to the Boston Edison Company (BECO/licensee) for the Pilgrim Nuclear Power Station located at the licensee's site in Plymouth County, Massachusetts.

ENVIRONMENTAL ASSESSMENTIdentification of Proposed Action:

The proposed action would grant exemptions from certain requirements of Appendix R of 10 CFR Part 50. The requests (Exemption Request Nos. 15, 18 and 22) seek exemptions from the provisions of subsections: 1) III.G.2.b to the extent that full area fire detection and automatic fire suppression would be required for the area between Corridor #137 (containing Division A safe shutdown circuits) on elevation 23 feet and Corridor #49 (containing redundant Division B safe shutdown circuits) on elevation (-) 1 foot; 2) III.G.2.b to the extent no combustibles or fire hazards are to be located between two redundant safe shutdown systems located in the same fire area. The subject of these exemption requests is a single cable tray located 13 feet above the floor on Elevation 23 feet that is located between the Train A and Train B Reactor

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Building Closed Cooling Water (RBCCW) rooms; and 3) III.G.3 that requires fire detection and automatic suppression for redundant safe shutdown equipment (in this case the normal torus water level indication cables) located in the same fire area when alternative safe shutdown capability is provided.

The Need for the Proposed Action:

The proposed exemptions are needed because the plant-specific circumstances and features described in the licensee's requests regarding Exemption Requests Nos. 15, 18 and 22 are the most practical means for meeting the intent of Appendix R and literal compliance would not significantly enhance the fire protection capability.

The existing physical arrangement, separation, lack of continuity of combustibles and existing automatic detection and suppression provide assurance that one train of redundant safe shutdown circuits would be available to achieve and maintain safe shutdown in the event of a fire in relation to Exemption Request No. 15.

The existence of a single cable tray (only intervening combustible) between redundant safe shutdown trains would not result in a single fire capable of simultaneously damaging both redundant trains due to the physical configuration, the existing detection and suppression, and the concrete plug that seals the equipment hatchway when equipment is not actually being moved. Thus, one train necessary to achieve and maintain safe shutdown would be available in the event of a fire in relation to Exemption Request No. 18.

The lack of fire detection and automatic suppression for the redundant torus water level indication cables would not result in the loss of both torus water level indications due to the lack of continuous combustibles, spatial separation and existing concrete barriers in the event of a fire in relation to Exemption Request No. 22.

Environmental Impacts of the Proposed Action:

The proposed exemptions, based on the existing physical plant design and fire protection features, will provide a degree of fire protection that is equivalent to that required by Appendix R for the affected areas of the plant such that there is no increase in the risk of fires at this facility. Consequently, the probability of fires has not been increased and the post-fire radiological releases will not be greater than previously determined, nor do the proposed exemptions otherwise affect radiological plant effluents. Therefore, the Commission concludes that there are no significant radiological environmental impacts associated with these proposed exemptions.

With regard to potential non-radiological impacts, the proposed exemptions involve features located entirely within the restricted area as defined in 10 CFR Part 20. They do not affect non-radiological plant effluents and have no other environmental impact. Therefore, the Commission concludes that there are no significant non-radiological 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 applicable portions of Section III.G of the Appendix R requirements. Such action would not enhance the protection of the environment and would result in unjustified costs to the licensee.

Alternative Use of Resources:

This action does not involve the use of any resources not considered previously in the Final Environmental Statements related to the operation of Pilgrim Nuclear Power Station.

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 NRC staff concludes that the proposed action will not have a significant effect on the quality of the human environment.

For further details with respect to this proposed action, see the licensee's letter dated August 10, 1987. The letter is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the Plymouth Public Library, 11 North Street, Plymouth, Massachusetts.

Dated at Rockville, Maryland, this 13<sup>th</sup> day of July, 1988.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard H. Wessman, Director  
Project Directorate I-3  
Division of Reactor Projects I/II

JUL 14 1988

st:  
Docket 50-293  
PD I-3 Reading  
M. Rushbrook  
D. McDonald  
J. Kopeck, PA

DOCKET NO. 50-293  
MEMORANDUM FOR: Rules and Procedures Branch  
Division of Rules and Records  
Office of Administration  
FROM: Office of Nuclear Reactor Regulation  
SUBJECT: BOSTON EDISON COMPANY = PILGRIM NUCLEAR POWER STATION

One signed original of the *Federal Register* Notice identified below is enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies ( 6 ) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- Notice of Consideration of Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Order.
- Exemption.
- Notice of Granting Exemption.
- Environmental Assessment.
- Notice of Preparation of Environmental Assessment.
- Other: \_\_\_\_\_

Office of Nuclear Reactor Regulation

Enclosure:  
As stated

Contact: Madelyn Rushbrook  
Phone: 21428

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OFFICE	NRR/RP I/II/PD I-3				
SURNAME	MRushbrook				
DATE	7/13/88				

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ENVIRONMENTAL ASSESSMENTIdentification of Proposed Action:

The proposed action would grant exemptions from certain requirements of Appendix R of 10 CFR Part 50. The requests (Exemption Request Nos. 15, 18 and 22) seek exemptions from the provisions of subsections: 1) III.G.2.b to the extent that full area fire detection and automatic fire suppression would be required for the area between Corridor #137 (containing Division A safe shutdown circuits) on elevation 23 feet and Corridor #49 (containing redundant Division B safe shutdown circuits) on elevation (-) 1 foot; 2) III.G.2.b to the extent no combustibles or fire hazards are to be located between two redundant safe shutdown systems located in the same fire area. The subject of these exemption requests is a single cable tray located 13 feet above the floor on Elevation 23 feet that is located between the Train A and Train B Reactor

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Building Closed Cooling Water (RBCCW) rooms; and 3) III.G.3 that requires fire detection and automatic suppression for redundant safe shutdown equipment (in this case the normal torus water level indication cables) located in the same fire area when alternative safe shutdown capability is provided.

The Need for the Proposed Action:

The proposed exemptions are needed because the plant-specific circumstances and features described in the licensee's requests regarding Exemption Requests Nos. 15, 18 and 22 are the most practical means for meeting the intent of Appendix R and literal compliance would not significantly enhance the fire protection capability.

The existing physical arrangement, separation, lack of continuity of combustibles and existing automatic detection and suppression provide assurance that one train of redundant safe shutdown circuits would be available to achieve and maintain safe shutdown in the event of a fire in relation to Exemption Request No. 15.

The existence of a single cable tray (only intervening combustible) between redundant safe shutdown trains would not result in a single fire capable of simultaneously damaging both redundant trains due to the physical configuration, the existing detection and suppression, and the concrete plug that seals the equipment hatchway when equipment is not actually being moved. Thus, one train necessary to achieve and maintain safe shutdown would be available in the event of a fire in relation to Exemption Request No. 18.

The lack of fire detection and automatic suppression for the redundant torus water level indication cables would not result in the loss of both torus water level indications due to the lack of continuous combustibles, spatial separation and existing concrete barriers in the event of a fire in relation to Exemption Request No. 22.

Environmental Impacts of the Proposed Action:

The proposed exemptions, based on the existing physical plant design and fire protection features, will provide a degree of fire protection that is equivalent to that required by Appendix R for the affected areas of the plant such that there is no increase in the risk of fires at this facility. Consequently, the probability of fires has not been increased and the post-fire radiological releases will not be greater than previously determined, nor do the proposed exemptions otherwise affect radiological plant effluents. Therefore, the Commission concludes that there are no significant radiological environmental impacts associated with these proposed exemptions.

With regard to potential non-radiological impacts, the proposed exemptions involve features located entirely within the restricted area as defined in 10 CFR Part 20. They do not affect non-radiological plant effluents and have no other environmental impact. Therefore, the Commission concludes that there are no significant non-radiological 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 applicable portions of Section III.G of the Appendix R requirements. Such action would not enhance the protection of the environment and would result in unjustified costs to the licensee.

Alternative Use of Resources:

This action does not involve the use of any resources not considered previously in the Final Environmental Statements related to the operation of Pilgrim Nuclear Power Station.

Agencies and Persons Consulted:

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Dated at Rockville, Maryland, this 13<sup>th</sup> day of July, 1988.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard H. Wessman, Director  
Project Directorate I-3  
Division of Reactor Projects I/II

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FOR THE NUCLEAR REGULATORY COMMISSION

15/

Richard H. Wessman, Director  
Project Directorate I-3  
Division of Reactor Projects I/II

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PDI-3 r/f  
R. Wessman  
B. Boger  
M. Rushbrook  
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OGC  
E. Jordan  
B. Grimes  
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