August 22, 1984

Docket No. 50-293

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Mr. William D. Harrington
Senior Vice President, Nuclear
Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199

Dear Mr. Harrington:

The Commission has issued the enclosed Amendment No. 76 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated March 27, 1984.

The changes revise the fire protection Technical Specifications to reflect changes made to the station in accordance with the requirements of Appendix R to 10 CFR Part 50. Only the changes relative to penetration fire barriers are included in this amendment. The other requested changes in the fire protection specifications are being reviewed and will be addressed in a future action.

A copy of the related Safety Evaluation is also enclosed.

Sincerely,

Original signed by/

Paul H. Leech, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:
1. Amendment No. 76 to License No. DPR-35
2. Safety Evaluation

cc w/enclosures:
See next page

DL:ORB#2	DL:ORB#2	DE:CEB	DL:ORB#2	OELD	DL:AD-OR
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Mr. William D. Harrington
Boston Edison Company
Pilgrim Nuclear Power Station

cc:

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

BOSTON EDISON COMPANY

DOCKET NO. 50-293

PILGRIM NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 76
License No. DPR-35

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Boston Edison Company (the licensee) dated March 27, 1984 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-35 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 76 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment:
Changes to the
Technical Specifications

Date of Issuance: August 22, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 76

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Replace the following pages of the Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain a vertical line indicating the area of change.

Remove	Insert
206e	206e
206e-1	206e-1
-	206e-2
206j	206j

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENTS
. Fire Hose Stations The interior fire hose stations shown in Table 3.12-2 shall be OPERABLE. APPLICABILITY: At all times when the equipment in the area protected by the fire hose station is required to be operable. ACTION: With a hose station inoperable, route an additional equivalent capacity hose to the unprotected area from an OPERABLE hose station within 1 hour.	E. Fire Hose Stations Each interior fire hose station shall be verified to be OPERABLE: 1. at least once per month by visual inspection of the station to assure all equipment is available. 2. at least once per cycle by removing the hose for inspection, replacing degraded coupling gaskets, and re-racking. 3. at least once per 3 years by a. partially opening each hose station valve to verify valve operability and no blockage. b. by conducting a hydrostatic test of each hose 1) at a pressure 50 psig greater than the maximum available pressure at that hose station, or 2) annually at the applicable service test pressure as listed in Table 821 of the "Standard for Care, Maintenance and Use of Hose," NFPA No. 198-1972, or c. by replacing each hose with a new or used hose which has been hydrostatically tested in accordance with the pressures specified in 4.12., E.3.b.
F. Fire Barrier System All fire barrier systems providing separation of redundant safe shutdown systems shall be functional. APPLICABILITY: At all times when the safe shutdown systems are required to be operable.	F. Fire Barrier Penetrations Surveillance requirements for penetrations in fire barriers described in specification 3.12.F are as follows:

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENTS
ACTION: With one or more of the required fire barrier systems nonfunctional, within one hour either establish a continuous fire watch on one side of the affected barrier or verify the OPERABILITY of an automatic fire detection or suppression system on at least one side of the nonfunctional fire barrier and establish an hourly fire watch patrol. EXCEPTION: When the Fire Areas on BOTH sides of the affected fire barrier are designated "HIGH RADIATION AREAS/AIRBORNE RADIOACTIVITY AREA", an hourly fire watch patrol may be established (e.g. for ALARA considerations) in lieu of a continuous fire watch.	1. Fire Barrier Penetration Seals Each fire barrier penetration seal shall be verified to be functional by a visual inspection at least once per operating cycle and subsequent to any installation, modification or maintenance affecting the seal. 2. Fire Doors Each fire door shall be tested once per cycle for operability of closure and latching mechanisms and for integrity. 3. Fire Dampers Each fire damper shall be tested once per cycle for operability and integrity.
G. Dry Chemical Systems The fixed dry chemical systems located in the following areas shall be OPERABLE: 1. Diesel Generator Room "A". 2. Diesel Generator Room "B". APPLICABILITY: At all times when equipment in the protected area is required to be operable. ACTION: With a dry chemical system inoperable, establish a continuous fire patrol with backup fire suppression equipment for the unprotected areas within one hour; restore the system to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the action taken, the cause of the inoperability and the plans for restoring the system to OPERABLE status.	G. Dry Chemical Systems Each dry chemical system shall be verified to be OPERABLE: A. At least once per 6 months by checking all stored dry chemical containers by pressure and weight against the required minimums. B. At least once per 18 months by: 1. Verifying the system actuates manually and automatically, upon receipt of a simulated test signal, and 2. Performance of a flow test through headers and nozzles to assure no blockage.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENTS
H. Yard Hydrants and Exterior Hose Houses The yard hydrants and exterior hose houses shown in Table 3.12-2 shall be OPERABLE. APPLICABILITY: At all times. ACTION: With a yard hydrant inoperable, within one hour have a sufficient number of additional lengths of 2-1/2" diameter hose located in an adjacent OPERABLE hydrant's hose house to provide service to the area protected by the inoperable hydrant.	H. Yard Hydrants and Exterior Hose Houses Each hydrant shall be verified OPERABLE: 1. At least once per month by a visual inspection of the hose house to assure all equipment is available. 2. At least twice per year (once in the fall and once in the spring) by inspecting each outdoor fire hydrant 3. At least once per year by performing surveillance requirements E.3.b or c.

BASES

3/4.12F FIRE BARRIER SYSTEM

The functional integrity of the fire barrier system ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. A functional fire barrier system, is considered to be the barrier itself with all penetration seals, doors and dampers intact or operable. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The fire barrier systems are a passive element in the facility fire protection program and are subject to periodic inspections.

Safe shutdown systems are those systems which must operate after a loss of offsite power and are required to achieve and maintain safe shutdown (hot and cold shutdown) conditions.

During periods of time when the barriers are not functional, either, 1) a continuous fire watch is required to be maintained in the vicinity of the affected barrier, or 2) the automatic fire detection or suppression system on at least one side of the affected barrier must be verified OPERABLE and an hourly fire watch patrol established until the barrier is restored to functional status. A fire watch patrol is a compensatory measure to survey area(s) in which the active and/or passive fire detection, suppression or barrier system(s) are in a degraded mode and is utilized for detection and reporting of fires.

The surveillance requirements are considered to be adequate since they were determined using accepted industry reference material as a basis applying good engineering judgement and station operating considerations.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. DPR-35

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION, UNIT 1

DOCKET NO. 50-293

1.0 Introduction

By letter dated March 27, 1984, the Boston Edison Company (BECo/the licensee) proposed changes in the Pilgrim Nuclear Power Station (PNPS) Technical Specifications to make the fire protection sections consistent with the requirements of Appendix R to 10 CFR Part 50. This Safety Evaluation (SE) relates only to Specification 3/4.12F concerning penetration fire barriers. Other requested changes in the fire protection Technical Specifications will be addressed in a future SE.

2.0 Evaluation

The proposed change expands the scope of Technical Specification 3/4.12F by including the fire doors and dampers, as well as the fire barrier penetration seals, among the fire barriers that must be functional when the safe shutdown systems are required to be operable. Thus, the revised Specification would address the entire fire barrier system rather than just the penetration seals. For this reason, the title of Specification 3.12F would be changed to "Fire Barrier System" and the limiting condition for operation (LCO) would be changed to read: "All fire barriers providing separation of redundant safe shutdown systems shall be functional." Operational tests of the fire doors and dampers would be added to the surveillance requirements of Specification 4.12F and its title would be changed to "Fire Barrier Penetrations." We find this change in scope to be acceptable and consistent with Appendix R to 10 CFR Part 50.

The action statement associated with the LCO presently requires that a continuous fire patrol be established in affected areas within one hour after a penetration fire barrier is found to be not functional. An exception is included in the action statement whereby a once per hour fire patrol, instead of "continuous fire patrol," would be required for a non-functioning penetration fire barrier between the main steam tunnel and the turbine building. However, the licensee is installing fire detection and/or suppression systems and requests that the action statement be modified to allow the alternative of verifying the operability of such a detection or suppression system on at least one side of a non-functional barrier and establishment of an hourly fire watch patrol. The present exception would be no longer needed since the steam tunnel can be included

in the Residual Heat Removal (RHR) "A" Valve Room or Turbine Building fire areas which have fire detection systems. This modification of the LCO would conform to the BWR Standard Specifications (NUREG-0123, Rev. 3). It is also our judgement that reliance upon an operable automatic fire detection or suppression system and an hourly fire watch patrol would provide a degree of safety at least equivalent to relying upon a continuous fire watch.

The licensee has also proposed the following exception to the action statement: "When the Fire Areas on BOTH sides of the affected fire barrier are designated "HIGH RADIATION AREAS/AIRBORNE RADIOACTIVITY AREA," an hourly fire watch patrol may be established (e.g., for ALARA considerations) in lieu of a continuous fire watch." This exception would permit the use of an hourly patrol in such an area even without an operable automatic fire detection or suppression system on at least one side of a non-functional fire barrier. This combination of circumstances is unlikely to occur. However, if it does, the need to minimize the exposure of personnel to substantial radiation would be more important than continuous surveillance against fire. On balance, we consider the hourly fire watch patrol to be acceptable for this situation.

3.0 Summary

The Technical Specification changes proposed by the licensee are consistent with the requirements of Appendix R to 10 CFR Part 50. In the event a fire barrier is found non-functional, our judgement is that reliance upon an operable automatic fire detection or suppression system and an hourly fire watch patrol would provide a degree of safety at least equivalent to relying upon a continuous fire watch. We also conclude that only an hourly fire watch patrol is acceptable, because of ALARA considerations, when the fire areas on both sides of the affected barrier are designated "High Radiation Areas/Airborne Radioactivity Area."

4.0 Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5.0 Conclusion

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: P. H. Leech

Dated: August 22, 1984