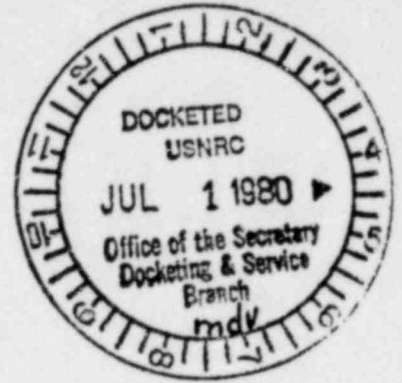


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J. EDWARD HOWARD
VICE PRESIDENT
NUCLEAR



June 27, 1980

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(45 FR 36082)

VP-N 80-69

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

ATTENTION: DOCKETING AND SERVICE BRANCH

Pilgrim Nuclear Power Station Unit #1
Proposed Rule Regarding Fire Protection
for Nuclear Plants Operating Prior
to January 1, 1979

Gentlemen:

On May 29, 1980, the Commission published in the Federal Register (45 FR 36083) a proposed rule on fire protection for nuclear plants operating prior to January 1, 1979. Comments on the proposed rule are due by June 30, 1980.

Boston Edison Company offers generic as well as specific comments on behalf of its Pilgrim Nuclear Power Station Unit #1. To facilitate future Commission action on this issue, Boston Edison Company's suggested revision to Appendix R, with the accompanying justification for the changes, is attached. We support and endorse, in their entirety, comments developed and submitted by the following groups: (1) KMC, Inc., a consultant to utilities on fire protection matters and the utilities that sponsored KMC, (2) the Edison Electric Institute Fire Protection and Prevention Task Force, and (3) DeBevoise & Liberman.

Our generic non specific comments in objection to the proposed regulation are:

- (1) The 30 day review period is entirely inadequate for the utilities to conduct a thorough review in light of the excessively specific and restrictive requirements proposed.
- (2) The stipulated time frame for implementation of Appendix R requirements would be difficult if not impossible to comply with.

Acknowledged by card.

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- (3) It would be impossible to determine if a-1 of the proposed requirements could be complied with by Pilgrim without an exhaustive study and/or analyses.
- (4) The outage time that would be required to accomplish some or all of the proposed modifications would be extensive.
- (5) Some of the proposed modifications would actually degrade existing levels of safety.
- (6) The prohibitive total cost outweighs the benefits of any significant increase in safety.
- (7) The ambiguous language used for some of the requirements of the proposed rule is certain to lead to mis-intrepretations.
- (8) Alternate methods for complying with the proposed rule are not permitted; this may nullify the modifications already implemented per the Fire Protection Safety Evaluation Report issued to Pilgrim Nuclear Power Station Unit #1.

We endorse the detailed specific comments with respect to each item of the proposed rule submitted by KMC, Inc., the Edison Electric Institute Fire Protection and Prevention Task Force and DeBevoise & Liberman. In addition to this, we offer the following major comments:

- A. "Need for the Proposed Rule". In the four years since the issuance of Branch Technical Position APCS 9.5-1, and its Appendix A, the utilities have diligently worked to implement the modifications mandated in the SER issued to each plant. Vast amounts of manpower and materials have been invested in the improvement of the fire protection program at Pilgrim Nuclear Power Station. Even the few remaining open items for Pilgrim are in their final phase of review by the NRC. All modifications which were committed by Boston Edison Company will be completed by the mandated date of October 1980.
- B. The proposed rule, if accepted, will be applied to all operating nuclear plants regardless of the prior agreements reached and systems modifications made during the past four years. The statement of consideration for the proposed rule contains the following statement which was added at the direction of the Commissioners and their staff rather than by the DOR/NRR staff which wrote the rest of the proposed rule:

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"There are, however, a few instances where the staff has accepted certain fire protection alternatives that would not satisfy some of the requirements of this proposed rule. The minimum requirements contained in this rule were developed over a three year period and, in each of these instances, the staff accepted a proposed alternative before these minimum requirements were established. All licensees will be expected to meet the requirements of this rule, in its effective form, including whatever changes result from public comments."

It should be noted by the Commissioners that there are far more than just "a few instances" where certain fire protection alternatives have been proposed and accepted. Each alternative was reached and agreed upon after a thorough examination of the entire fire protection program at Pilgrim Nuclear Power Plant. One of the advantages of guidelines expressed in a Branch Technical Position or in a Regulatory Guide, is that alternate designs that respond to the concerns expressed in the guidelines are allowed after a careful evaluation of those alternatives. A rule developed without recognition of specific plant problems does not allow this flexibility. One must do exactly what the rule says, regardless of its overall affect on plant safety, operation, and overall effectiveness of fire protection. It must also be noted that these "fire protection alternatives" were reached after consultation with qualified competent fire protection engineers serving as consultants to the NRC Fire Hazard Review Teams.

- C. The regulation in present format is being excessively specific, unjustifiably restrictive, and does not allow the latitude necessary to accommodate the differences which exist between currently operating plants. Historically, NRC rules have stated specific objectives to be met while the detailed design and/or implementing procedures to meet those objectives have been the responsibility of the licensees. The Proposed Rule does not conform to this practice and, therefore, greatly increases the difficulty and cost associated with meeting those requirements.
- D. The proposed schedule for implementation of the modifications is unrealistic (with the exception of alternate shutdown or dedicated shutdown). If the proposed rule is issued in its present form, it would require all licensees to meet the rule's stated requirements by November 1, 1980 including whatever changes resulted from public comments. It would be

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physically impossible to design and install alternate shutdown systems or a dedicated shutdown system by the dates specified. Another item of significance is the requirement imposed by Section III Q, "Associated Circuits". The scope of modification in this case will be enormous. Even the items that Boston Edison Company feels can be complied with would require long lead times to design and install. Considering the length of time that was required to comply with the Fire Protection Safety Evaluation Report requirements, it would be ridiculous to assume that a date of November 1, 1980 could be met. It is to be noted that the effort associated with qualifying the penetration seal to the requirement of the proposed rule would also be impossible to accomplish by November 1, 1980 because of the limited number of testing facilities available to perform qualification tests. More importantly, the present "state of the art" does not permit determination of the maximum expected pressure differential experienced at any particular fire seal. In view of the above arguments we support the statements made by the Commissioners Hendrie and Kennedy concerning the schedule. (See "Separate Comments of Commissioners Hendrie and Kennedy in the Supplementary Information Section of the rule).

- E. Requirement for alternate shutdown/dedicated shutdown capability. Boston Edison Company has submitted safe shutdown analyses for nine (9) critical areas which are currently being reviewed by the NRC Staff. To require a date of April 1, 1981 for implementation of the required modifications, when the NRC Staff itself has not yet determined whether our alternatives proposed in these analyses are acceptable, is impractical. Requiring a date of December 1, 1980 for implementation of a dedicated shutdown system is equally impractical if we are to be told at some future date that our plans for an alternate shutdown system were rejected. Also, in earlier submittals, we have indicated technical objections concerning rerouting certain safe shutdown cables from one critical area to another because of the degradation to safety in the new areas.
- F. Item III P., "Reactor Coolant Pump Lubrication System", and Item III Q., "Associated Circuits". The requirements related to these two items would have significant impact on Pilgrim since the involved guidelines were issued after the plant was built.
- G. Consideration of fires simultaneously with other accidents. The wording of some requirements allows interpretations which could be construed to apply to structures, systems, and components "important to safety". Although all previously

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issued guidance states that fires need not be postulated to be concurrent with non-fire-related failures in other systems, other plant accidents or the most severe natural phenomena, this regulation does not contain that definition and needs to be clarified to be consistent. We believe the wording of the regulation needs to be changed to clarify that the probability of a simultaneous fire with these events is sufficiently low so that the current NRC requirements for fire protection are to ensure that the plant can be brought to and maintained in a safe shutdown condition. Many structures, systems, and components which are important to safety in the event of an accident are not required for safety in the event of a fire alone.

- H. Section II A., "Fire Protection Program" under "General Requirements". The proposed regulation is applicable to nuclear power plants operating prior to January 1, 1979; however, this section directs licensees to "arrange the structures, systems, and components important to safety so that if a fire starts in spite of the fire prevention activities and is not promptly extinguished by the fixed automatic or manual fire suppression activities, it will not prevent the safe shutdown of the plant". This requirement is unrealistic as there is little latitude in rearrangement of structures, systems, or components in operating plants.
- I. Section II E., "Fire Hazards Analysis". This section requires that a fire hazards analysis be conducted for each area of the plant in accordance with the new guideline requiring three hour fire rated barriers or 50 feet of horizontal or vertical air space between redundant shutdown systems. For plants in operation such as Pilgrim Nuclear Power Station, such requirements would be impossible to meet because of the present layout of the equipment, systems, etc.
- J. Section II G., "Protection of Safe Shutdown Capability". This section is excessively detailed in prescribing protective features. For example, under "the minimum fire protection features" that are proposed, it would be difficult, if not impossible, to justify the prescribed minimum combination as specified in this section. The requirement for an alternate shutdown along with detection, fixed suppression and manual suppression would be an over specification.

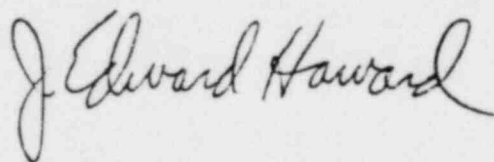
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We believe that the significant costs associated with Appendix R cannot be justified by any realistic cost/benefit appraisal. We trust that the Commissioners will give serious consideration to our arguments, and those of the rest of the industry, and either withdraw the proposed rule or substantially modify it. Boston Edison Company would welcome the opportunity to participate in any future Commission deliberations on this subject.

Very truly yours,

A handwritten signature in cursive script that reads "J. Edward Howard". The signature is written in dark ink and is positioned to the right of the typed name "J. Edward Howard".