

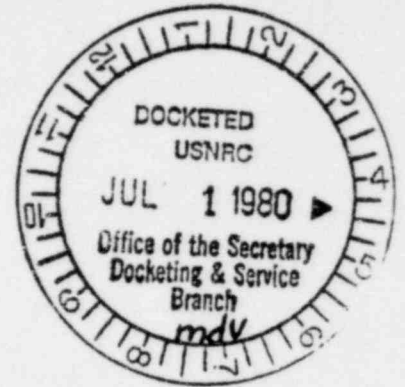


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EM 975-7

June 27, 1980

DOCKET NUMBER **PR-50** (22)
 PROPOSED RULE **(45 FR 36082)**



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

Attention: Docketing and Service Branch

Subject: Proposed Fire Protection Amendment to 10 CFR 50;
 45 Fed. Reg. 36082 (May 29, 1980)

Dear Sir:

Commonwealth Edison has reviewed the subject notice and offers the attached comments.

We appreciate having been given the opportunity to comment.

D. L. Peoples
 D. L. Peoples
 Director of
 Nuclear Licensing

Attachment

2-4-1, Pt. 50

4778A

Acknowledged by card.....

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Comments on the Proposed Amendment R
Fire Protection to 10CFR Part 50

1. In the supplementary information provided with the proposed rule change, it is stated that there are a few instances where the Staff has accepted certain fire protection alternatives that would not satisfy some of the requirements of this proposed rule. It further states that all licensees will be expected to meet the requirements of this rule, in its effective form, including whatever changes to the rule result from public comments.

The fire protection program for each plant has been reviewed by at least one staff member (most of the time, two or more were involved) with at least one and sometimes two qualified fire protection engineers (usually consultants) employed by the NRC. These engineers were competent in their fields and were also cognizant of the NRC guidelines.

The conclusions and decisions reached by these engineers based on their experience, site visits and analysis were reviewed by their supervisors and then a Safety Evaluation Report (SER) was written. The latest fire protection SER or SER Supplement received by this company was dated August 9, 1979. The latest letter requesting further fire protection information was dated March 20, 1980. This letter also indicated all the areas of the plant review that were acceptable.

The acceptable items in this most recent letter included some items which would probably no longer be acceptable if this rule is enforced to override previous agreements documented in SER's.

The decisions which are documented in previous SER's and supplements to these SER's were made and reviewed by competent, qualified engineers, and they are therefore decisions which represent a very conservative position on fire protection and nuclear safety.

The agreements documented in the SER's and their supplements should be binding as they stand and should not be subject to yet another review. The gain, if any, in improvement of fire protection and nuclear safety by reopening past SER agreements would, in our judgment, be minimal and insignificant.

2. On the second page of the supplementary information section at the beginning of the third paragraph in the first column, it is stated that "...differences exist between the Staff and the licensees in the interpretation of the Staff's guidelines...".

It is true that there are differences between the Staff and the licensees' interpretations; however, there are apparently differences in interpretation between Staff members as well as between NRC fire protection consultants and the Staff. Agreements have been reached between the Staff reviewers, the NRC fire protection consultants and the licensees on most fire protection issues at each plant. These agreements have been documented in SER's and their supplements. Apparently, however, some of these agreements will be voided if this proposed rule is published and enforced as indicated in the second paragraph of the first column on this same page.

This illustrates that the guidelines are subject to interpretation. The interpretations of the Staff and their consultants in previous reviews are those of professionally qualified men making knowledgeable, prudent judgments, and they should not be voided to gain inconsequential perceived benefits in terms of safety at the expense of the licensees.

3. On the second page of the supplementary information section in the first paragraph in the second column, it is stated that "All modifications (except for alternate or dedicated shutdown capability) would be required to be implemented by November 1, 1980."

If previous SER documented agreements are voided by this rule, and because of this, additional modifications are required to meet the "new" interpretation of the guidelines, it will be impossible to meet the November 1, 1980 implementation date. This is particularly true if new equipment must be purchased and installed. Therefore, this completion deadline should apply only to commitments made prior to this change in interpretation.

Before an implementation date can be established for modifications made necessary by the change in interpretation of the requirements, the changes must be identified. Unreasonable schedules should not be imposed on the licensees because of the fickleness of the Staff on this issue.

4. Supplementary Information Section

In Section I, Introduction and Scope, it states that Appendix R does not rescind any requirements set forth in the SER for any facility.

This statement appears to be inconsistent with the statement in the Supplementary Information that in a few instances, the Staff has accepted certain fire protection alternatives and that these would have to be upgraded to this new rule.

Agreements previously reached have considered all factors in a particular plant, they have considered the fire protection guidelines, and they have followed detailed discussion between the Staff and their fire protection consultant, as well as with the licensee. Those agreements previously reached and documented in SER's should indeed not be rescinded but should be binding for the NRC, as well as the licensee, as they stand in the SER.

5. Supplementary Information Section
Part III Specific Requirements

- A. Fire Water Distribution System

It is true that water is the best extinguishing agent and also that the sooner a fire is extinguished the better. It should also be recognized that an accidental or inadvertent initiation of a water fire suppression system in the absence of fire can have serious nuclear safety implications on the plant and, therefore, this fact must be given serious consideration in the application of a water suppression system.

There will probably be as many or perhaps more incidents of false initiation of the water suppression systems as there will be fires requiring their operation. This fact requires that caution be exercised in the application of water suppression systems. In some cases, alternates to water are preferable and this must be recognized.

6. Supplementary Information Section
Part III Specific Requirements

A. Fire Water Distribution System

In the second paragraph of this section, it is stated that the water supply have adequate pressure and volume for any combination of automatic and manual suppression demands.

This paragraph should be restated to say that the water supply should have adequate pressure and volume for the largest automatic or manual fire suppression system in a safety related area plus two nearby hose stations.

7. Supplementary Information Section
Section III Specific Requirements

J. Emergency Lighting

The section states that eight-hour battery-powered units should be provided.

1½ or 2-hour battery-powered emergency lights are installed in some plants. These units are portable and may be moved from their "installed" location to the location where they are needed. If a plant is equipped as above, the 1½ to 2-hour units, assuming enough of them are available, should be allowed in lieu of 8-hour battery-powered units.

8. Part 50.48 Fire Protection

Part (c) of this section discusses schedule dates.

See comment 3.

The April 1, 1981 date should consider the availability of equipment that might have to be added to satisfy the alternate shutdown capability. For example, lead time on some instrumentation may be such that the April date cannot be met, particularly with the TMI priorities for equipment existing at the same time as those for fire protection.

9. Part 50.48 Fire Protection
Part III Specific Requirements
Part I Fire Brigade Training

This part is much too detailed for a regulation. The regulation should include only the basic requirement for brigade training and the frequency of such training. The details of who should do the training, a detailed list of items to be included in such training, etc., are not appropriate to a regulation.

10. Part 50.48 Fire Protection
Part III Specific Requirements
Part J Emergency Lighting

See comment 7.

11. Part 50.48 Fire Protection
Part III Specific Requirements
Part K Administrative Controls

This part is much too detailed for a regulation. The regulation should include only administrative controls which shall exist to control fire hazards by minimizing combustibles, controlling storage of combustibles, controlling the handling and storage of transient combustibles and providing controls for welding, cutting, etc., which are possible ignition sources. The details itemized in this section of the proposed rule are not appropriate to a regulation.

12. Part 50.48 Fire Protection
Part III Specific Requirement
Part N Fire Barrier Penetration Seal Qualification

It is overly restrictive to require a test by an independent testing laboratory if such a test can be performed at other facilities. If the test is properly witnessed by a recognized authority in the field, the test should be considered valid.

13. Part 50.48 Fire Protection
Part III Specific Requirements
Part N Fire Barrier Penetration Seal Qualification

This requirement outlines much too much detail of a qualification test for a regulation. The regulation should only state that a test is necessary. It should also allow for analysis since there are configurations which are probably impossible to test, and there are also configurations, such as penetrations sealed with concrete (i.e.: a cable surrounded by concrete) which should not require testing to verify the seal qualification.

14. Part 50.48 Fire Protection
Section III Specific Requirements
Part N Fire Barrier Penetration Seal Qualification

Comment #13 presents our view on the detail of qualification appearing in a regulation. This comment is a detailed review of the itemized requirements of the proposed qualification program.

Item 1

If the cables tested are constructed of a more combustible material than those used in a facility, the tested penetration seals should be acceptable. For example, if a penetration seal is tested with cable that is not qualified by the

fire test in IEEE 383 and the facility has cable installed which is qualified by the fire test in IEEE 383, the test of the penetration seal should be acceptable.

Item 2

The test should be of typical penetration seals to verify that the system is an effective fire stop. The fire stops should be constructed using representative materials and cable. Analysis should be allowed to extend the test data to all openings. Conservatism exists since the fire loading will in most cases be less than the three hour test required.

Item 4

This paragraph states the fire barrier shall be tested in both directions unless the barrier is symmetrical. Unsymmetrical fire stop wall designs should be tested from both sides. Unsymmetrical floor designs need only be fire tested or exposed from the underside. It is not reasonable to assume that a floor fire stop will be exposed to the same level of fire on the top side as on the bottom side since heat rises. The requirement should be modified to require both sides to be tested only if plant conditions warrant it.

Item 5

There are two professional societies writing standards for testing cable penetrations, IEEE and ASTM. Neither of these organizations has required a positive pressure differential in the furnace during the test. These standards (IEEE) or draft standards (ASTM) have been written by professional personnel knowledgeable in the field, and they have not felt that a positive pressure within the furnace to be necessary to achieve valid results. Based on this observation, it is our judgment that any gain in safety obtained by having a positive pressure in the test furnace is minimal and does not justify the effort.

To our knowledge, no fire stops have been tested to date with a positive pressure in the test furnace. If this is made a requirement, all fire stops would have to be retested at excessive costs for little benefit.

Item 7

The purpose and value of the hose stream test is questionable.

If the test is included to verify that when a hose stream is actually applied to the fire stop under fire conditions, it is superfluous since the hose stream will extinguish the fire bearing in mind that the cable fires do not propagate rapidly.

If the test is to impose an external force on the fire stop, it is not representative of the kind of force which the cable system might impose on a fire stop and is therefore not a valid test.

The test comes from a procedure used to test fire doors where it has a well-defined purpose, but the need and purpose of the test as related to cable penetration fire stops is questionable. Therefore, this requirement should be deleted from the test requirement.

15. Part 50.48 Fire Protection
Part III Specific Requirements
Part P Reactor Coolant Pump Lubrication System

This item gives direction for protection of the Reactor Coolant Pump (RCP) Lubrication System. The paragraph should be clarified by stating that the RCP is associated with PWR plants only, and it is not a requirement of BWR plants.

16. Part 50.48 Fire Protection
Part III Specific Requirements
Part Q Associated Circuits

The concept of associated circuits did not exist in plants operating before January 1, 1979. This is a totally new requirement on these plants and would take an extended analysis to even identify associated circuits.

The discussion of redundant safe shutdown circuits is confusing. Safe shutdown in the event of fire (i.e.: an alternate shutdown method) does not require any redundancy. If the safe shutdown circuits are those circuits connected with safety related systems such as core spray, safety injection, etc., the rule is imposing standards on the plants which are not related to fire only.

Since the concept of associated circuits is totally new to plants operating before January 1, 1979, this item in Appendix R is imposing requirements on the plants for the first time. Any plant changes relative to associated circuits could not possibly be completed within the schedules proposed in this Appendix. The requirement for consideration of associated circuits should be deleted.