

ATTACHMENT I to JPN-93-030

PROPOSED TECHNICAL SPECIFICATION CHANGES  
FIRE BARRIER PENETRATION SEAL  
SURVEILLANCE SCHEDULE CHANGE

(JPTS-92-005)

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
Docket No. 50-333  
DPR-59

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2. If the fire protection systems smoke and/or heat detectors in Tables 3.12.1 and 3.12.2 cannot be restored to an operable status within 14 days, a written report to the Commission outlining the action taken, the cause of inoperability and plans and schedule for restoring the detectors to an operable status shall be prepared and submitted within 30 days.

F. Fire Barrier Penetration Seals

1. All fire barrier penetrations, including cable penetration barriers, fire doors and fire dampers, in fire zone boundaries protecting safety related areas shall be functional.
2. With one or more of the required fire barrier penetrations non-functional, within one hour establish a continuous fire watch on at least one side of the affected penetration or verify the operability of fire detectors on at least one side of the non-functional fire barrier and establish an hourly fire watch patrol. Restore the non-functional fire barrier penetration(s) to functional status within 7 days or, in lieu of any other report required by Specification 6.9.A, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.B within 30 days outlining the action taken, the cause of the non-functional penetration and plans and schedule for restoring the fire barrier penetration(s) to functional status.

F. Fire Barrier Penetration Seals

1. All fire barrier penetration seals for each protected area shall be visually inspected once per operating cycle to verify functional integrity. For those fire barrier-penetrations that are not in the as-designed condition, an evaluation shall be performed to show that the modification has not degraded the fire rating of the fire barrier penetration.
2. Any repair of fire barrier penetration seals shall be followed by a visual inspection.

**SAFETY EVALUATION FOR  
PROPOSED TECHNICAL SPECIFICATION CHANGES  
FIRE BARRIER PENETRATION SEAL  
SURVEILLANCE SCHEDULE CHANGE (JPTS-91-030)**

**I. DESCRIPTION OF THE PROPOSED CHANGE**

The proposed changes to the James A. FitzPatrick Technical Specifications are as follows:

Page 244g, Specification 4.12.F

Replace the phrase ". . . once/1.5 years . . ." with ". . . once per operating cycle . . ."

Delete the asterisk at the end of Specification 4.12.F.1.

Delete the footnote in the lower right-hand corner of the page.

**II. PURPOSE OF THE PROPOSED CHANGE**

This application for an amendment to the James A. FitzPatrick Technical Specifications changes the surveillance interval from once every 1.5 years to once every refueling cycle. The practical effect of the amendment would be to reset the start date of the fire barrier penetration surveillance interval in Technical Specification 4.12.F.1 from September 27, 1991 to January 3, 1993.

The baseline inspection of the fire barrier penetration seals was one of the commitments from an August 2, 1991 meeting with the NRC staff in Region I. In this meeting, the New York Power Authority committed to complete a full baseline barrier seal inspection not later than 30 days after startup from the 1992 refuel outage (Reference 1).

The baseline inspection for the fire barrier penetrations was accomplished between November 1991 and December 1992. Due to the one-time extension granted in Amendment 177 (References 2 and 3), these inspections cannot be credited to the surveillance interval that started on September 27, 1991.

The current Technical Specification fire barrier penetration surveillance interval is from September 27, 1991 to March 29, 1993; with a 25% grace period extending the surveillance interval to August 13, 1993. Therefore, the fire barrier penetrations are required to be inspected by August 13, 1993, approximately 8 months after the last inspections were completed and during an interval that is less than 45% of a normal inspection interval. If this amendment is approved, the next surveillance interval will start approximately three months early (i.e., January 3 versus March 29).

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**III. SAFETY IMPLICATIONS OF THE PROPOSED CHANGE**

Fire barrier penetration inspection interval start date can be safely reset from September 27, 1991 to January 3, 1993 for the following reasons:

The fire barrier penetrations were in excellent physical condition at the end of the 1992 refueling outage as a result of the inspection, repair and reinspection programs conducted during the outage on the fire barrier penetration seals, fire doors and fire dampers. For the fire barrier penetration seals, a baseline inspection was completed during the 1992 refueling outage. During this baseline inspection, detailed data on the physical configuration of the penetration seals was collected. Deficient seals were repaired and subsequently reinspected and baselined. Future routine seal inspections will visually verify that the seal configuration has not changed from the baseline and visually verify that the surface of the seal has not degraded.

The fire barrier penetration seal baseline inspection was more detailed than a regular visual inspection. The baseline inspection documented the following information for each of the approximately 7200 fire barrier penetration seals:

- Penetration details (location, size, shape, orientation, serial number, presence of label, applicable Fire Areas/Fire Zones, applicable penetration design drawings, applicable penetration location drawings).
- Barrier (wall/ceiling/floor) construction details.
- Number, size and distance between pipes or conduit passing through the penetration.
- Type and depth of seal material.
- Type and location of damming material.

**SAFETY EVALUATION**

The ability of the plant to detect and suppress a fire will not be significantly degraded as a result of the changes to the fire barrier penetration inspection interval. Other existing fire protection systems and features further assure that a fire in the vicinity of a fire barrier penetration will be promptly detected and extinguished. These include:

- Automatic suppression and/or detection systems are installed in many fire areas including carbon dioxide systems, halon, sprinklers and water sprays.
- Manual hose stations and portable extinguishers are installed throughout the plant.
- A trained fire brigade is on site to respond to a fire.
- A local fire department is available to respond to a fire.
- Fire protection systems are periodically inspected and tested to assure that they are capable of performing their intended function.
- Fire barriers separate safety-related components and reduce the potential for the spread of fire between fire areas or zones.
- Remote/alternate safe shutdown panels, procedures and operator training will assure that the plant can be safely shutdown and maintained in a shutdown condition for a fire in the Control Room, the Relay Room, the Cable Spreading Room, the North Cable Tunnel or the Battery Room Corridor.
- A dedicated emergency lighting system and a communication system for remote/alternate shutdown have been installed.

Maintaining the present surveillance interval provides no significant additional level of safety. The present surveillance interval began on September 27, 1991 and ends on March 29, 1993. With the 25% extension allowed by the FitzPatrick Technical Specifications (Section 1.0.T, pages 5 and 6; and Section 4.0.B.1, page 30) the end of the current interval could be extended until August 13, 1993.

A baseline inspection of mechanical and electrical fire barrier penetration seals was completed during the 1992 refueling outage. This baseline inspection collected detailed data on the physical configuration of the seals. Future routine seal inspections will visually verify that the seal configuration has not changed from the baseline and visually verify that the surface of the seal has not degraded. During the baseline inspection deficient seals were repaired and subsequently reinspected and baselined. Although fire doors and fire dampers were not part of the baseline inspection program, they were inspected and repaired under a similar program. These inspection, repair and reinspection programs assured that the fire barrier penetrations were in excellent physical condition at the end of this outage.

**SAFETY EVALUATION**

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**Existing fire barrier penetrations will not be significantly degraded during the proposed surveillance interval.** Because of the design and materials used in the construction of fire barrier penetrations, they do not degrade rapidly. Degradation normally occurs due to the long term effects of moisture, heat, radiation, physical wear and dirt. Therefore, they are very unlikely to experience any significant degradation from now until July 1994 (i.e., the end of the proposed surveillance interval). The small amount of degradation the fire barrier penetrations may undergo prior to their inspection, is insignificant and will not significantly reduce a fire barrier penetration's ability to prevent the spread of fire from one side of the barrier to the other.

**The once per operating cycle surveillance interval is based on a nominal 18-month fuel cycle length.** The inspection interval was selected to permit access to penetration seals in radiation areas during outages when radiation levels are generally lower and minimize personnel radiation exposure incurred during the inspections.

**IV. EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION**

Operation of the FitzPatrick plant in accordance with the proposed Technical Specification Amendment would not involve a significant hazards consideration as defined in 10 CFR 50.92, since it would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed changes to the fire barrier penetration inspection interval involve no hardware modifications, no changes to system operating procedures nor effects the ability of any system to perform its intended function. This proposed reset of the surveillance interval start date will not reduce the ability of the fire barrier penetration seals to perform their function because the baseline inspection assures integrity. The probability of a fire is not increased and the ability of plant personnel and fire protection equipment to detect and extinguish a fire is not affected. The proposed changes to the fire barrier penetration inspection interval will not introduce any additional combustible materials or ignition sources into the plant.

2. Create the possibility of a new or different kind of accident from those previously evaluated.

The proposed changes to the fire barrier penetration inspection interval will not create the possibility of a new or different kind of accident or fire. Analyses have been performed which assume a fire in each area or zone regardless of the actual fire hazard and combustible loading present. Fire protection features (including fire barriers and fire barrier penetrations) have been installed throughout the plant to limit the spread of fires between zones and areas. Analyses have demonstrated that the plant can be safely shutdown and maintained in a shutdown condition assuming the loss of all equipment in any single fire area or zone.

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3. Involve a significant reduction in the margin of safety.

The proposed changes to the fire barrier penetration inspection interval will not reduce the ability of the barriers to perform their intended function. The inspection, repair and reinspection programs conducted during the 1992 refueling outage assured that the fire barrier penetrations were in excellent physical condition at the end of this outage.

#### **V. IMPLEMENTATION OF THE PROPOSED CHANGE**

The proposed changes to the fire barrier penetration inspection interval will not affect the Fire Protection program or the environment. The changes to the fire barrier penetration inspection interval will only change the start date of the inspection required by Specification 4.12.F.1.

#### **VI. CONCLUSION**

These changes, as proposed, do not constitute an unreviewed safety question as defined in 10 CFR 50.59. That is, they:

1. will not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report;
2. will not increase the possibility for an accident or malfunction of a type different from any evaluated previously in the safety analysis report;
3. will not reduce the margin of safety as defined in the basis for any technical specification; and
4. involves no significant hazards consideration, as defined in 10 CFR 50.92.

#### **VII. REFERENCES**

1. NYPA letter, R.E. Beedle to U.S. NRC, dated September 13, 1991, (JPN-91-050), regarding schedule for long term fire protection actions.
2. NYPA letter, R.E. Beedle to U.S. NRC, dated December 19, 1991, (JPN-91-069), regarding proposed changes to the Technical Specifications for a onetime extension of the fire barrier penetration surveillance interval.
3. NRC letter, B. C. McCabe to R. E. Beedle, dated February 10, 1992, regarding issuance of Amendment 177 changes the Technical Specifications for a onetime extension of the fire barrier penetration surveillance interval.

ATTACHMENT III to JPN-93-030

PROPOSED TECHNICAL SPECIFICATION CHANGES  
FIRE BARRIER PENETRATION SEAL  
SURVEILLANCE SCHEDULE CHANGE  
MARKUP OF TECHNICAL SPECIFICATION PAGES

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#### F. Fire Barrier Penetration Seals

1. All fire barrier penetration seals for each protected area shall be visually inspected ~~once/15 years~~ to verify functional integrity. For those fire barrier-penetrations that are not in the as-designed condition, an evaluation shall be performed to show that the modification has not degraded the fire rating of the fire barrier penetration.
2. Any repair of fire barrier penetration seals shall be followed by a visual inspection.

*Once per operating cycle*

\* The current surveillance interval for visually inspecting fire barrier penetration seals is extended until May 15, 1992. This is a onetime extension, effective only for this inspection interval. The next surveillance interval began September 27, 1991.