



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 177 TO FACILITY OPERATING LICENSE NO. DPR-59

POWER AUTHORITY OF THE STATE OF NEW YORK

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

1.0 INTRODUCTION

By letter dated December 19, 1991, the Power Authority of the State of New York (the licensee) submitted a request for changes to the James A. FitzPatrick Nuclear Power Plant, Technical Specifications (TS). The requested changes would provide a one-time extension to the fire barrier penetration surveillance interval required by Technical Specification (TS) 4.12.F.1. Specifically, TS 4.12.F.1 requires that fire barrier penetration seals be visually inspected once every 18 months. This amendment provides a one-time extension of 3 months until May 15, 1992, to complete these fire barrier penetration seal visual inspections.

2.0 EVALUATION

The Code of Federal Regulations, 10 CFR Part 50, Appendix R, "Fire Protection Program For Nuclear Power Facilities Operating Prior to January 1, 1979," requires that each nuclear power plant establish a fire protection program that extends the concept of defense-in-depth to fire protection in fire areas important to safety, with the following objectives:

1. To prevent fires from starting;
2. To detect rapidly, control, and extinguish promptly those fires that do occur;
3. To provide protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant.

Fire barriers are just one feature of the FitzPatrick fire protection program. The functional integrity of these fire barrier penetrations ensures that fire will be confined or adequately retarded from spreading to an adjacent portion of the facility. 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 penetrations are a passive element in the facility fire protection program and are subject to periodic inspections.

On August 2, 1991, during a meeting with the NRC's staff concerning FitzPatrick's fire protection program, the licensee committed to complete a full baseline barrier seal inspection not later than 30 days after startup from the 1993 refueling outage. The licensee accelerated this baseline inspection schedule so that it could be performed concurrently with the fire barrier penetration seal inspections required by TS 4.12.F.1. Each of these inspections takes longer because the baseline inspection requirements are more detailed than those previously employed at FitzPatrick. Because of the additional time required to perform each inspection, the licensee determined that a 3-month extension until May 15, 1992, was necessary to complete the surveillance requirements of TS 4.12.F.1. On the date that this extension becomes applicable, approximately 57 percent of the penetrations will have already been inspected using the new, more-detailed, baseline inspection requirements. An even greater percentage of penetrations will have been inspected by the projected startup date following the current 1992 refueling outage.

The NRC staff has reviewed the licensee's request for a one-time extension of 3 months (May 15, 1992) to the surveillance interval in TS 4.12.F.1. The staff has determined that this extension is warranted because it will provide the time needed by the licensee to perform a thorough, detailed, baseline inspection of the fire barrier penetration seals. This baseline inspection should enhance efforts to detect existing penetration seal degradation and deficiencies, and assist in accurately trending and correcting future degradation.

The staff further concludes that the current design, construction, and maintenance requirements for fire barrier penetration seals in nuclear power plants ensure that the degradation that may occur during the proposed 3-month extension will be minimal and thus will not significantly reduce their ability to prevent the spread of fire from one side of the barrier to the other.

The staff has reviewed the current levels of fire protection, detection, and suppression at the FitzPatrick plant to ensure that the proposed extension does not compromise the ability of the plant to adhere to the defense-in-depth concept outlined in 10 CFR Part 50, Appendix R. The defense-in-depth concept has been incorporated into the FitzPatrick fire protection program via detection, suppression, and protection features which include:

- o Automatic suppression and/or detection systems are installed in some fire hazard areas including carbon dioxide systems, halon and water sprays.
- o Manual hose stations are installed throughout the plant.
- o A trained fire brigade is on site to respond to a fire.
- o A local fire department is available to respond to a fire.

- o Portable extinguishers are installed throughout the plant.
- o Fire protection systems are periodically tested to assure that they are capable of performing their intended function.
- o Fire barriers separate safety-related components and reduce the potential for the spread of fire between fire areas or zones.
- o An alternate safe shutdown panel, procedures and operator training will assure that the plant can be safely shutdown and maintained in a shutdown condition.
- o The physical integrity of structural steel is assured by fire proof coatings.
- o Emergency lighting and communication systems have been installed.

The staff concludes that, even should seal degradation occur during the 3-month extension, the current levels of fire detection, suppression, and protection at FitzPatrick are adequate to ensure maintenance of safe shutdown capability and to provide reasonable assurance of prompt extinguishment of postulated fires.

For the above reasons, the staff finds that the proposed amendment is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (57 FR 715). Accordingly, the 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 the amendment.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: February 10, 1992