

November 21, 1985

Docket No. 50-333

Mr. John C. Brons  
Senior Vice President -  
Nuclear Generation  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Dear Mr. Brons:

The Commission has issued the enclosed Amendment No. 97 to Facility Operating License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant. The amendment consists of changes to the Technical Specifications in response to your request dated May 2, 1985.

The amendment revises the Technical Specifications concerning primary airlock leak testing requirements, as specified in Appendix J to 10 CFR 50.

A copy of our Safety Evaluation is enclosed.

Sincerely,

Original signed by/

Harvey J. Abelson, Project Manager  
Operating Reactors Branch #2  
Division of Licensing

Enclosures:

1. Amendment No. 97 to License No. DPR-59
2. Safety Evaluation

cc w/enclosures:  
See next page

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Power Authority of the State of New York

James A. FitzPatrick Nuclear  
Power Plant

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

POWER AUTHORITY OF THE STATE OF NEW YORK

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 97  
License No. DPR-59

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by the Power Authority of the State of New York (the licensee) dated May 2, 1985, 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 J;
  - 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 2.C(2) of Facility Operating License No. DPR-59 is hereby amended to read as follows:

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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 97, 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: November 21, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 97

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Pages

173

173a - added

174

194

## 4.7 (cont'd)

The third test of each set shall be conducted when the plant is shutdown for the 10-year plant inservice inspections.

Permissible periods for testing. The performance of Type A tests shall be limited to periods when the plant facility is nonoperational and secured in the shutdown condition under the administrative control and in accordance with the plant safety procedures.

- (2) Type B tests, (except tests for airlocks), shall be performed during each reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years.
- (3) Type B tests of airlocks shall be conducted at an internal pressure of not less than 45 psig (Pa). The overall leakage rate for the airlock shall be less than or equal to 268 SCFD (0.05 La). Airlock tests shall be conducted:
  - a) Every six months.
  - b) Prior to restoration of containment integrity, when maintenance has been performed on the airlock which could affect its sealing capability.

## 4.7 (cont'd)

- c) Within three days of opening the airlock, when containment integrity is required and maintenance has been performed on the airlock which could affect its sealing capability.
- (4) Airlock seals shall be tested at a pressure not less than 45 psig. The seal leakage rate shall be less than or equal to 120 SCFD. Airlock seal tests shall be conducted:
- a) Prior to restoration of containment integrity\*. If maintenance which could affect sealing capability was performed the entire airlock shall be tested as required by 4.7.A.2.e (3).
  - b) Within three days after opening the airlock, when containment integrity is required.
  - c) Once every three days, during periods of frequent openings when containment integrity is required.

## 4.7 (cont'd)

## (5) Type C test.

Type C tests shall be performed during each reactor shutdown for refueling but in no case at intervals greater than two years.

(6) Other leak rate tests specified in Section 4.7d shall be performed during each reactor shutdown for refueling but in no case at intervals greater than two years.

## f. Containment modification

Any major modification, replacement of a component which is part of the primary reactor containment boundary, or resealing a seal-welded door, performed after the preoperational leakage rate test shall be followed by either a Type A, Type B, or Type C test, as applicable, for the area affected by the modification. The measured leakage from this test shall be included in the test report. The acceptance criteria as appropriate, shall be met. Minor modifications, replacements, or re-sealing on seal-welded doors, performed directly prior to the conduct of a scheduled Type A test do not require a separate test.

## 4.7 BASES (cont'd)

assumption of no holdup in the secondary containment, resulting in a direct release of fission products from the primary containment through the filters and stack to the environs. Therefore, the specified primary containment leak rate and filter efficiency are conservative and provide additional margin between expected offsite doses and 10CFR100 guidelines.

The maximum allowable test leak rate at the peak pressure of 45 psig (Pa) is 0.5 weight percent per day (Lam). The maximum allowable test leak rate at the reduced pressure of 23 psig ( $P_t$ ) will be verified to be conservative by actual primary containment leak rate measurements at both 45 psig and 23 psig upon completion of the containment structure.

To allow a margin for possible leakage deterioration between intervals, the maximum allowable leak rate (Ltm), which will be met to remain on the normal test schedule, is 0.75  $L_t$ . In addition, it is intended to operate the primary containment structure at a slight positive pressure to continuously monitor primary containment leakage.

As most leakage and deterioration of integrity is expected to occur through penetrations, especially those with resilient seals, a periodic leak rate test program of such penetrations is conducted at the peak pressure of 45 psig to insure not only that the leakage remains acceptably low but also that the sealing materials can withstand the accident pressure. For airlock leak test, a seal test at the peak pressure could be substituted for the complete airlock test, if no maintenance work is done which could affect the sealing capability of the airlock.

The leak rate testing program was originally based on AEC guidelines for development of leak rate testing and surveillance schedules for reactor containment vessels, (16) and discussed in Question 5.4 of the FSAR. With the exceptions listed in Table 4.7-2, the system conforms to the latest AEC guidelines (17). The exceptions stated in Table 4.7-2 are necessary since additional requirements were added after the system was designed.

- B. Standby Gas Treatment System and
- C. Secondary Containment

Initiating reactor building isolation and operation of the Standby Gas Treatment System to maintain at least a 1/4 in. of water vacuum within the secondary containment provides an adequate test of the operation of the reactor



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 97 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 May 2, 1985, the Power Authority of the State of New York (the licensee) proposed revisions to Section 4.7.A of the FitzPatrick Technical Specifications (TS) concerning primary containment airlock test requirements. The proposed revisions were prompted, in part, by the Commission's amendment to 10 CFR 50, Appendix J, effective October 22, 1980, regarding leak testing of containment airlocks. The Commission's amendment provides greater flexibility of testing in the case of frequent airlock usage.

2.0 EVALUATION

Paragraph JJJ.D.2(b) of Appendix J to 10 CFR 50 specifies three airlock test requirements. Paragraph JJJ.D.2.(b)(i) requires that containment airlocks be demonstrated operable by conducting a leak test every 6 months during periods when containment integrity is required, by pressurizing the interior of the airlock to Pa (Pa is the calculated peak containment internal pressure related to the design basis accident.) and verifying that the leakage rate is within its specified limit. TS 4.7.A.2.e(3)(a) has been proposed to comply with this portion of Appendix J and is therefore acceptable.

Paragraph JJJ.D.2(b)(iii) of Appendix J requires an airlock test be performed within 3 days after the airlock has been opened (or at least once every 3 days for openings more frequent than every 3 days) during periods when containment integrity is required. The proposed TS 4.7.A.2.e.(3)(c) revises the time interval for testing from once every 24 hours to once every 3 days to comply with this portion of Appendix J and is therefore acceptable. Paragraph JJJ.D.2(b)(iii) further specifies that testing the airlock seals in lieu of the entire airlock fulfills the 3-day test requirement, provided no maintenance has been done on the airlock. TS 4.7.A.2.e.(4)(b) and (c) have been proposed to comply with this portion of Appendix J and are, therefore, also acceptable.

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Paragraph JJJ.D.2(b)(ii) of Appendix J requires that airlocks opened during periods when containment integrity is not required shall be tested at the end of such periods at not less than Pa. The licensee, in its letter of May 2, 1985, requested an exemption from the requirements of Paragraph JJJ.D.2(b)(ii) of Appendix J. The licensee proposed to conduct a seal test in lieu of the entire airlock test following a period during which containment integrity is not required and no maintenance has been performed on the airlock that could affect sealing capability. The seal test would be conducted at Pa (45 psig) with a leakage limit of 120 SCFD. The Commission granted the requested exemption on September 18, 1985. TS revisions have been proposed by the licensee to make airlock testing requirements consistent with this exemption and are therefore acceptable.

The licensee has also proposed TS revisions which now specify the test pressure Pa (45 psig) and leakage criteria 0.05 La (La is the maximum allowable leakage rate at pressure Pa.) (268 SCFD), as required by Paragraph JJJ.D.2(b)(iii) and (iv) of Appendix J. These revisions have been proposed to make the TS comply with this portion of Appendix J and are therefore acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATIONS

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 and changes in surveillance requirements. 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.

### 4.0 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: L. Ruth

Dated: November 21, 1985