

February 17, 1989

Docket No. 50-333

DISTRIBUTION



Docket file	BGrimes
NRC PDR	TMeek (4)
Local PDR	WJones
GLainas	ERutcher
BBoger	ACRS (10)
RCapra	GPA/PA
CVogan	ARM/LFMB
DLaBarge	JJohnson, RI
OGC	BClayton, EDO
DHagan	EJordan
JCraig	PDI-1 Rdg

Mr. John C. Brons  
 Executive 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.125 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 application transmitted by letter dated November 9, 1988 (TAC 71135).

The amendment completes the Commission action initiated in our letter of November 18, 1988, "Temporary Waiver of Compliance With Technical Specification Surveillance Tests 4.7.A.2.a(10) and 4.7.A.2.f." and supercedes the Temporary Waiver. This amendment also completes the Commission action concerning our letter dated November 29, 1988 which transmitted the "Notice of Consideration of Issuance of Amendment to Facility Operating License and Proposed No Significant Hazards Consideration and Opportunity For Hearing." This Notice was published in the Federal Register on December 7, 1988 (53 FR 49366). The date by which a request for hearing may be filed, which was published in this Notice as January 6, 1989, was corrected to December 22, 1988 by a Correction Notice published in the Federal Register on December 13, 1988 (53 FR 50142). A copy of the Correction Notice was sent to you by letter dated December 14, 1988.

The amendment eliminates two tests, required by the Technical Specifications, during the 1988 refueling outage. These tests are a Type A primary containment integrated leak rate test and a Type A, Type B, or Type C leak rate test following replacement of the turbine exhaust line manual block valve in the high pressure coolant injection system. An exemption from the requirements of Appendix J to 10 CFR Part 50 to perform these tests was granted by our letter of November 16, 1988 and published in the Federal Register on November 25, 1988 (53 FR 47784).

JFol  
" "

8902230468 890217  
 PDR ADDCK 05000333  
 P PDC

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY

David E. LaBarge, Project Manager  
Project Directorate I-1  
Division of Reactor Projects, I/II

Enclosures:

- 1. Amendment No. 125 to DPR-59
- 2. Safety Evaluation

cc: w/enclosures  
See next page

[TAC 71135]

\*SEE PREVIOUS CONCURRENCE

OFC	: PDI-1	: SPLB	: PDI-1	: PDI-1	: OGC	:	:
NAME	: CVogan	: JCraig	: DLaBarge	: RCapra	: SHLewis	:	:
DATE	: 2/16/89	: *1/6/89	: 2/16/89	: 2/17/89	: *2/8/89	:	:

OFFICIAL RECORD COPY

Mr. John C. Brons  
Power Authority of the State of New York

James A. FitzPatrick Nuclear  
Power Plant

cc:

Mr. Gerald C. Goldstein  
Assistant General Counsel  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Ms. Donna Ross  
New York State Energy Office  
2 Empire State Plaza  
16th Floor  
Albany, New York 12223

Resident Inspector's Office  
U. S. Nuclear Regulatory Commission  
Post Office Box 136  
Lycoming, New York 13093

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

Mr. Radford J. Converse  
Resident Manager  
James A. FitzPatrick Nuclear  
Power Plant  
Post Office Box 41  
Lycoming, New York 13093

Mr. A. Klausman  
Senior Vice President - Appraisal  
and Compliance Services  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Mr. J. A. Gray, Jr.  
Director Nuclear Licensing - BWR  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Mr. George Wilverding, Manager  
Nuclear Safety Evaluation  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Mr. Robert P. Jones, Supervisor  
Town of Scriba  
R. D. #4  
Oswego, New York 13126

Mr. R. E. Beedle  
Vice President Nuclear Support  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Mr. J. P. Bayne, President  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Mr. S. S. Zulla  
Vice President Nuclear Engineering  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Mr. Richard Patch  
Quality Assurance Superintendent  
James A. FitzPatrick Nuclear  
Power Plant  
Post Office Box 41  
Lycoming, New York 13093

Mr. R. Burns  
Vice President Nuclear Operations  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Charlie Donaldson, Esquire  
Assistant Attorney General  
New York Department of Law  
120 Broadway  
New York, New York 10271



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. 125  
License No. DPR-59

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Power Authority of the State of New York (the licensee) dated November 9, 1988, 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 I;
  - 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:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 125, 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

*Robert A. Capra*

Robert A. Capra, Director  
Project Directorate I-1  
Division of Reactor Projects, I/II

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: February 17, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 125

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages

170  
174

Insert Pages

170  
174

## JAFNPP

### 4.7 (cont'd)

Type A test shall be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria. \*

b. Type B tests (Local leak rate testing of containment penetrations)

(1.) All preoperational and periodic Type B tests shall be performed by local pneumatic pressurization of the containment penetrations, either individually or in groups, at a pressure not less than Pa, and the gas flow to maintain Pa shall be measured.

(2.) Acceptance criteria

The combined leakage rate of all penetrations and valves subject to Type B and C tests shall be less than 0.60 La, with the exception of the valves sealed with fluid from a seal system.

\* In accordance with an exemption from 10 CFR 50 Appendix J, a Type A test need not be performed during the 1988 refueling outage.

## JAFNPP

### 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 resealing on seal-welded doors, performed directly prior to the conduct of a scheduled Type A test do not require a separate test.

\* In accordance with an exemption from 10 CFR 50 Appendix J, a Type A, B, or C test is not required for the replacement of the HPCI turbine exhaust line block valve (23-HPI-11) during the 1988 refueling outage.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 125 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 November 9, 1988, the Power Authority of the State of New York (PASNY), the licensee for James A. FitzPatrick Nuclear Power Plant, requested an emergency amendment in order to delete the requirement to perform a Type A primary containment integrated leak rate test (PCILRT) during the 1988 refueling outage which would otherwise be required by Technical Specification (TS) Section 4.7.A.2.a(10). TS Section 4.7.A.2.a(10) requires that, if two consecutive Type A tests fail to meet the applicable acceptance criteria, a retest must be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive tests meet the acceptance criteria. However, the Type A tests performed at the FitzPatrick plant in 1982, 1985 and 1987 did not meet the Type A test acceptance criteria because the total leakage from all of the isolation valves and penetrations subjected to Type B and Type C Local Leak Rate Tests (LLRT), when added to the appropriate Type A leakage test result, was excessive.

Additionally, in the letter dated November 9, 1988, the licensee requested an emergency amendment in order to delete the requirement to perform a Type A, Type B, or Type C Leak Rate Test during the 1988 refueling outage following replacement of an isolation valve in the high pressure coolant injection (HPCI) turbine exhaust piping to the primary containment which would otherwise be required by TS Section 4.7.A.2.f. The licensee stated that, because of the piping configuration, the welds attaching the inboard side of this valve to its containment penetration cannot be pressure tested.

2.0 EVALUATION

The TS require that local leak rate tests (Types B and C) be performed during each refueling outage. Also, the TS require that the primary containment integrated leak rate test (Type A) be performed during each refueling outage if the previous two tests failed to meet the acceptance criteria. The LLRTs provide surveillance of components such as isolation valves and air lock seals.

The PCILRT is a measurement of the overall integrated leakage rate of the containment. It includes testing of passive and structural components and verifies the adequacy of the LLRT program.

Exceeding the allowable leakage rate during the PCILRT indicates that either a passive or structural component is leaking or that there may be an inadequacy in the LLRT program. For passive or structural components, the only test that could determine that the leak exists is the PCILRT. In the case of the LLRT program (Type B and C tests), the PCILRT serves as a means of verification of the LLRT program results.

The failures of the FitzPatrick 1982, 1985, and 1987 "as-found" PCILRTs were a result of excessive leakage observed from the pathways of the Types B and C tests. The licensee's review of LLRT data from all refueling outages conducted from 1977 through 1987 revealed that FitzPatrick LLRT leakage consistently exceeded the limit of 0.6 La before repair. The review further indicated that the root cause of the problem was containment isolation valve (CIV) leakage. Certain CIVs historically had failed repeatedly during LLRTs. The licensee concluded that the most effective approach to eliminate the excessive leakage was through a Corrective Action Plan (CAP) using the guidance given in NRC Information Notice 85-71 dated August 22, 1985. The CAP recommended replacement of 33 CIVs identified as being historically poor performers (excessive leakage). The licensee has replaced 21 of the valves during the 1988 refueling outage, and will replace 12 during the 1990 refueling outage. These valves are being replaced with valves which have better leakage characteristics and are easier to maintain. The licensee believes this will correct the leakage problem that has been observed during the past 10 years.

As part of the CAP to replace the CIVs, the licensee also has implemented improved valve maintenance practices. The licensee has purchased a main steam isolation valve seat maintenance tool from the valve manufacturer. In addition, plant mechanics have received training in conducting leak repairs from the valve vendors, and an apprenticeship program (certified by the Institute of Nuclear Power Operations) for mechanics has been implemented.

The staff has reviewed the licensee's CAP and finds it acceptable for granting an amendment from the requirement to perform a Type A leak test during the 1988 refueling outage. The new valves are expected to eliminate the previous failures and correct the bulk of the problem. All valves have been tested prior to startup from the refueling outage with satisfactory results, including the 12 valves scheduled to be replaced during the 1990 refueling outage. Therefore, there is adequate assurance that these valves will perform their intended function with a satisfactory level of leakage until the 1990 refueling outage. At that time, these valves also will be replaced with the new valves and all CIVs will be subjected to the Type A test. Therefore, the licensee's amendment request to TS Section 4.7.A.2.a(10) is approved.

As part of the CAP, one of the valves replaced during the 1988 refueling outage was the HPCI turbine exhaust manual isolation valve (23-HPI-11). The licensee stated that, because of the piping configuration, the weld attaching the inboard side of this valve to its containment penetration cannot be pressure tested, and therefore requested an amendment to the TS requirement for pressure testing at the 1988 refueling outage. The TS requires that a leak rate test (Type A, B, or C test as appropriate) be performed following any major modification or replacement of a component which is part of the primary containment boundary. In lieu of the leak rate test, the licensee proposed an alternate testing program of 100 percent radiography of the weld and a dye penetrant test to ensure leak tight integrity of the weld.

Since there are no flange connections on the HPCI turbine exhaust line valve, isolation of the weld from the containment atmosphere to create an LLRT test volume is impossible. There are no valves between the subject weld and the containment atmosphere that can isolate the weld. The staff has reviewed the licensee's alternate testing program of 100 percent radiography of the weld and dye penetrant testing and concluded that these tests are adequate to ensure the structural and leak tight integrity of the HPCI turbine exhaust piping. Therefore, the staff concludes that these non-destructive examinations meet the intent of TS Section 4.7.A.2.f. The licensee's amendment request to the TS Section is, therefore, approved. The licensee has further committed to perform a Type A test during the refueling outage in 1990.

### 3.0 SUMMARY

On the basis of the licensee's CAP to eliminate the root cause of the successive Type A test failures, and the improved valve maintenance program, the staff concludes that the licensee's proposed request for an amendment to the requirements of TS Section 4.7.A.2.a(10) with regard to a Type A PCILRT during the 1988 refueling outage is acceptable. This arrangement will permit resumption of the normal retest schedule during the 1990 refueling outage. Also, the licensee's request concerning non-destructive examination of welds for the HPCI turbine exhaust isolation valve in lieu of Type A, Type B, or Type C leak rate test of TS Section 4.7.A.2.f is acceptable.

### 4.0 ENVIRONMENTAL CONSIDERATION

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. 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 Sec 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.

5.0 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.

Dated: February 17, 1989

PRINCIPAL CONTRIBUTORS:

R. Anand  
D. LaBarge

February 17, 1989

Docket No. 50-333

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

Dear Mr. Brons:

DISTRIBUTION

<u>Docket file</u>	BGrimes
NRC PDR	TMeek (4)
Local PDR	WJones
GLainas	EButcher
BBoger	ACRS (10)
RCapra	GPA/PA
CVogan	ARM/LFMB
DLaBarge	JJohnson, RI
OGC	BClayton, EDO
DHagan	EJordan
JCraig	PDI-1 Rdg

The Commission has issued the enclosed Amendment No.125 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 application transmitted by letter dated November 9, 1988 (TAC 71135).

The amendment completes the Commission action initiated in our letter of November 18, 1988, "Temporary Waiver of Compliance With Technical Specification Surveillance Tests 4.7.A.2.a(10) and 4.7.A.2.f." and supercedes the Temporary Waiver. This amendment also completes the Commission action concerning our letter dated November 29, 1988 which transmitted the "Notice of Consideration of Issuance of Amendment to Facility Operating License and Proposed No Significant Hazards Consideration and Opportunity For Hearing." This Notice was published in the Federal Register on December 7, 1988 (53 FR 49366). The date by which a request for hearing may be filed, which was published in this Notice as January 6, 1989, was corrected to December 22, 1988 by a Correction Notice published in the Federal Register on December 13, 1988 (53 FR 50142). A copy of the Correction Notice was sent to you by letter dated December 14, 1988.

The amendment eliminates two tests, required by the Technical Specifications, during the 1988 refueling outage. These tests are a Type A primary containment integrated leak rate test and a Type A, Type B, or Type C leak rate test following replacement of the turbine exhaust line manual block valve in the high pressure coolant injection system. An exemption from the requirements of Appendix J to 10 CFR Part 50 to perform these tests was granted by our letter of November 16, 1988 and published in the Federal Register on November 25, 1988 (53 FR 47784).

~~8902230668~~ 388

John C. Brons

- 2 -

February 17, 1989

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY

David E. LaBarge, Project Manager  
Project Directorate I-1  
Division of Reactor Projects, I/II

Enclosures:

- 1. Amendment No. 125 to DPR-59
- 2. Safety Evaluation

cc: w/enclosures  
See next page

[TAC 71135]

\*SEE PREVIOUS CONCURRENCE

OFC	: PDI-1	: SPLB	: PDI-1	: PDI-1	: OGC	:	:
NAME	: CVogan	: JCraig	: DLaBarge	: RCapra	: SHLewis	:	:
DATE	: 2/16/89	: *1/6/89	: 2/16/89	: 2/17/89	: *2/8/89	:	:

OFFICIAL RECORD COPY

Mr. John C. Brons  
Power Authority of the State of New York

James A. FitzPatrick Nuclear  
Power Plant

cc:

Mr. Gerald C. Goldstein  
Assistant General Counsel  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Ms. Donna Ross  
New York State Energy Office  
2 Empire State Plaza  
16th Floor  
Albany, New York 12223

Resident Inspector's Office  
U. S. Nuclear Regulatory Commission  
Post Office Box 136  
Lycoming, New York 13093

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

Mr. Radford J. Converse  
Resident Manager  
James A. FitzPatrick Nuclear  
Power Plant  
Post Office Box 41  
Lycoming, New York 13093

Mr. A. Klausman  
Senior Vice President - Appraisal  
and Compliance Services  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Mr. J. A. Gray, Jr.  
Director Nuclear Licensing - BWR  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Mr. George Wilverding, Manager  
Nuclear Safety Evaluation  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Mr. Robert P. Jones, Supervisor  
Town of Scriba  
R. D. #4  
Oswego, New York 13126

Mr. R. E. Beedle  
Vice President Nuclear Support  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Mr. J. P. Bayne, President  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Mr. S. S. Zulla  
Vice President Nuclear Engineering  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Mr. Richard Patch  
Quality Assurance Superintendent  
James A. FitzPatrick Nuclear  
Power Plant  
Post Office Box 41  
Lycoming, New York 13093

Mr. R. Burns  
Vice President Nuclear Operations  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, New York 10601

Charlie Donaldson, Esquire  
Assistant Attorney General  
New York Department of Law  
120 Broadway  
New York, New York 10271



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. 125  
License No. DPR-59

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Power Authority of the State of New York (the licensee) dated November 9, 1988, 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 I;
  - 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.(?) of Facility Operating License No. DPR-59 is hereby amended to read as follows:

~~8902230670~~ 588

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 125, 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

*Robert A. Capra*

Robert A. Capra, Director  
Project Directorate I-1  
Division of Reactor Projects, I/II

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: February 17, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 125

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages

170  
174

Insert Pages

170  
174

## **JAFNPP**

### **4.7 (cont'd)**

Type A test shall be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria. \*

**b. Type B tests (Local leak rate testing of containment penetrations)**

- (1.) All preoperational and periodic Type B tests shall be performed by local pneumatic pressurization of the containment penetrations, either individually or in groups, at a pressure not less than Pa, and the gas flow to maintain Pa shall be measured.

(2.) Acceptance criteria

The combined leakage rate of all penetrations and valves subject to Type B and C tests shall be less than 0.60 La, with the exception of the valves sealed with fluid from a seal system.

\* In accordance with an exemption from 10 CFR 50 Appendix J, a Type A test need not be performed during the 1988 refueling outage.

## JAFNPP

### 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 resealing on seal-welded doors, performed directly prior to the conduct of a scheduled Type A test do not require a separate test.

\* In accordance with an exemption from 10 CFR 50 Appendix J, a Type A, B, or C test is not required for the replacement of the HPCI turbine exhaust line block valve (23-HPI-11) during the 1988 refueling outage.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 125 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 November 9, 1988, the Power Authority of the State of New York (PASNY), the licensee for James A. FitzPatrick Nuclear Power Plant, requested an emergency amendment in order to delete the requirement to perform a Type A primary containment integrated leak rate test (PCILRT) during the 1988 refueling outage which would otherwise be required by Technical Specification (TS) Section 4.7.A.2.a(10). TS Section 4.7.A.2.a(10) requires that, if two consecutive Type A tests fail to meet the applicable acceptance criteria, a retest must be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive tests meet the acceptance criteria. However, the Type A tests performed at the FitzPatrick plant in 1982, 1985 and 1987 did not meet the Type A test acceptance criteria because the total leakage from all of the isolation valves and penetrations subjected to Type B and Type C Local Leak Rate Tests (LLRT), when added to the appropriate Type A leakage test result, was excessive.

Additionally, in the letter dated November 9, 1988, the licensee requested an emergency amendment in order to delete the requirement to perform a Type A, Type B, or Type C Leak Rate Test during the 1988 refueling outage following replacement of an isolation valve in the high pressure coolant injection (HPCI) turbine exhaust piping to the primary containment which would otherwise be required by TS Section 4.7.A.2.f. The licensee stated that, because of the piping configuration, the welds attaching the inboard side of this valve to its containment penetration cannot be pressure tested.

2.0 EVALUATION

The TS require that local leak rate tests (Types B and C) be performed during each refueling outage. Also, the TS require that the primary containment integrated leak rate test (Type A) be performed during each refueling outage if the previous two tests failed to meet the acceptance criteria. The LLRTs provide surveillance of components such as isolation valves and air lock seals.

8902230672 4/88

The PCILRT is a measurement of the overall integrated leakage rate of the containment. It includes testing of passive and structural components and verifies the adequacy of the LLRT program.

Exceeding the allowable leakage rate during the PCILRT indicates that either a passive or structural component is leaking or that there may be an inadequacy in the LLRT program. For passive or structural components, the only test that could determine that the leak exists is the PCILRT. In the case of the LLRT program (Type B and C tests), the PCILRT serves as a means of verification of the LLRT program results.

The failures of the FitzPatrick 1982, 1985, and 1987 "as-found" PCILRTs were a result of excessive leakage observed from the pathways of the Types B and C tests. The licensee's review of LLRT data from all refueling outages conducted from 1977 through 1987 revealed that FitzPatrick LLRT leakage consistently exceeded the limit of 0.6 La before repair. The review further indicated that the root cause of the problem was containment isolation valve (CIV) leakage. Certain CIVs historically had failed repeatedly during LLRTs. The licensee concluded that the most effective approach to eliminate the excessive leakage was through a Corrective Action Plan (CAP) using the guidance given in NRC Information Notice 85-71 dated August 22, 1985. The CAP recommended replacement of 33 CIVs identified as being historically poor performers (excessive leakage). The licensee has replaced 21 of the valves during the 1988 refueling outage, and will replace 12 during the 1990 refueling outage. These valves are being replaced with valves which have better leakage characteristics and are easier to maintain. The licensee believes this will correct the leakage problem that has been observed during the past 10 years.

As part of the CAP to replace the CIVs, the licensee also has implemented improved valve maintenance practices. The licensee has purchased a main steam isolation valve seat maintenance tool from the valve manufacturer. In addition, plant mechanics have received training in conducting leak repairs from the valve vendors, and an apprenticeship program (certified by the Institute of Nuclear Power Operations) for mechanics has been implemented.

The staff has reviewed the licensee's CAP and finds it acceptable for granting an amendment from the requirement to perform a Type A leak test during the 1988 refueling outage. The new valves are expected to eliminate the previous failures and correct the bulk of the problem. All valves have been tested prior to startup from the refueling outage with satisfactory results, including the 12 valves scheduled to be replaced during the 1990 refueling outage. Therefore, there is adequate assurance that these valves will perform their intended function with a satisfactory level of leakage until the 1990 refueling outage. At that time, these valves also will be replaced with the new valves and all CIVs will be subjected to the Type A test. Therefore, the licensee's amendment request to TS Section 4.7.A.2.a(10) is approved.

As part of the CAP, one of the valves replaced during the 1988 refueling outage was the HPCI turbine exhaust manual isolation valve (23-HPI-11). The licensee stated that, because of the piping configuration, the weld attaching the inboard side of this valve to its containment penetration cannot be pressure tested, and therefore requested an amendment to the TS requirement for pressure testing at the 1988 refueling outage. The TS requires that a leak rate test (Type A, B, or C test as appropriate) be performed following any major modification or replacement of a component which is part of the primary containment boundary. In lieu of the leak rate test, the licensee proposed an alternate testing program of 100 percent radiography of the weld and a dye penetrant test to ensure leak tight integrity of the weld.

Since there are no flange connections on the HPCI turbine exhaust line valve, isolation of the weld from the containment atmosphere to create an LLRT test volume is impossible. There are no valves between the subject weld and the containment atmosphere that can isolate the weld. The staff has reviewed the licensee's alternate testing program of 100 percent radiography of the weld and dye penetrant testing and concluded that these tests are adequate to ensure the structural and leak tight integrity of the HPCI turbine exhaust piping. Therefore, the staff concludes that these non-destructive examinations meet the intent of TS Section 4.7.A.2.f. The licensee's amendment request to the TS Section is, therefore, approved. The licensee has further committed to perform a Type A test during the refueling outage in 1990.

### 3.0 SUMMARY

On the basis of the licensee's CAP to eliminate the root cause of the successive Type A test failures, and the improved valve maintenance program, the staff concludes that the licensee's proposed request for an amendment to the requirements of TS Section 4.7.A.2.a(10) with regard to a Type A PCILRT during the 1988 refueling outage is acceptable. This arrangement will permit resumption of the normal retest schedule during the 1990 refueling outage. Also, the licensee's request concerning non-destructive examination of welds for the HPCI turbine exhaust isolation valve in lieu of Type A, Type B, or Type C leak rate test of TS Section 4.7.A.2.f is acceptable.

### 4.0 ENVIRONMENTAL CONSIDERATION

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. 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 Sec 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.

5.0 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.

Dated: February 17, 1989

PRINCIPAL CONTRIBUTORS:

R. Anand  
D. LaBarge