

October 24, 1990

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

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Dear Mr. Brons:

SUBJECT: ISSUANCE OF AMENDMENT FOR FITZPATRICK (TAC NO. 76967)

The Commission has issued the enclosed Amendment No. 166 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 June 12, 1990.

The amendment incorporates the Residual Heat Removal (RHR) System and the Core Spray (CS) System containment isolation valves for the associated Keep-Full systems into Technical Specification Tables 3.7-1 and 4.7-2.

As discussed with your staff, it is especially important that system operation be fully addressed by procedure changes to prevent an inadvertent drain path to the suppression chamber (1) from the reactor vessel when establishing RHR system operation in the shutdown cooling mode or the fuel pool cooling assist mode or (2) from the Condensate Storage Tanks when the CS pump suction is lined up to that source of water.

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
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 166 to DPR-59
2. Safety Evaluation

cc: w/enclosures
See next page

*See previous concurrence

PDI-1:LA	PDI-1:PM	SPLB	OGC	D:PDI-1
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DOCUMENT NAME: AMENDMENT TAC 76967. 104

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

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Sincerely,

A handwritten signature in cursive script, appearing to read "D. LaBarge".

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

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2. Safety Evaluation

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See next page

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James A. FitzPatrick Nuclear
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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. 166
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 June 12, 1990, 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. 166, 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 to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 24, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 166.

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages

206c
213

Insert Pages

206c
213

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TABLE 3.7-1
(Sh. 12 of 15)

PRIMARY CONTAINMENT ISOLATION VALVES

CONTAINMENT PENETRATION	PENETRATION FUNCTION	VALVE NUMBER	ISOLATION SIGNAL	CLOSE TIME (SEC) (5)	NORMAL STATUS (7)	REMARKS	
210A (con't)	RHR to Suppression Pool	10MOV-16A	R	N/A	Closed	Pump minimum flow.	
		10MOV-21A	G,R	N/A	Closed	Heat exchanger drain.	
		10MOV-167A	R	N/A	Closed	Heat exchanger vent.	
		10RHR-95A	Reverse Flow	N/A	Open	RHR Keep-Full min. flow	
	RCIC	13MOV-27	K,R	5	Closed	Pump minimum flow.	
	Core Spray Test to Suppression Pool	14MOV-5A	R	N/A	Open	Pump minimum flow.	
		14MOV-26A	G,R	45	Closed	Throttle valve for flow test.	
		14CSP-62A	Reverse Flow	N/A	Open	Core Spray Keep-Full min. flow.	
	210B	RHR to Suppression Pool	10MOV-34B	G,R	70	Closed	Throttle valve for flow test and suppression pool cooling. Note 2.
			10MOV-16B	R	N/A	Closed	Pump minimum flow.
10MOV-21B			G,R	N/A	Closed	Heat exchanger drain.	
10MOV-167B			R	N/A	Closed	Heat exchanger vent.	
10RHR-95B			Reverse Flow	N/A	Open	RHR Keep-Full min. flow	
Core Spray Test to Suppression Pool		14CSP-62B	Reverse Flow	N/A	Open	Core Spray Keep-Full min. flow.	

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TABLE 4.7-2
EXCEPTION TO TYPE C TESTS

CONTAINMENT PENETRATION	PENETRATION FUNCTION	VALVE NUMBER	LOCAL LEAK RATE TEST PERFORMED
202B	Vacuum Breaker - Reactor Building to Suppression Chamber	27AOV-101A 27AOV-101B	These valves will be tested in the reverse direction.
205	Pressure Suppression Chamber Purge Exhaust (Air or Nitrogen)	27AOV-117 27MOV-117	These valves will be tested in the reverse direction.
210A	RHR to Suppression Pool, RCIC, Core Spray Test to Suppression Pool	10MOV-16A 10MOV-21A 10MOV-34A 10MOV-167A 13MOV-27 14MOV-5A 14MOV-26A 10RHR-95A 14CSP-62A	Will not be tested as lines are water sealed by suppression chamber water. Valve 10MOV-34A is tested during the Type C test of Penetration X-211A.
210B	RHR to Suppression Pool, HPCI, Core Spray Test to Suppression Pool	10MOV-16B 10MOV-21B 10MOV-34B 10MOV-167B 14MOV-5B 14MOV-26B 23MOV-25 10RHR-95B 14CSP-62B	Will not be tested as lines are water sealed by suppression chamber water. Valve 10MOV-34B is tested during the Type C test of Penetration X-211B.
211A	RHR to Suppression Spray Header	10MOV-38A	This valve will be tested in the reverse direction.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 166 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

INTRODUCTION

By letter dated June 12, 1990, the Power Authority of the State of New York (PASNY or the licensee) submitted an amendment requesting changes to the Technical Specifications (TS) for the James A. FitzPatrick Nuclear Power Plant. The amendment would add four new primary containment isolation valves to Table 3.7-1, "Primary Containment Isolation Valves," and the same four isolation valves to Table 4.7-2, "Exception to Type C Tests." Each valve is located at the discharge of the Keep-Full system associated with each of the two Residual Heat Removal (RHR) Systems and each of the two Core Spray (CS) Systems.

As stated in the submittal, the systems have been installed but have never been used. They will remain isolated and not declared operational until this amendment is issued. As requested in the submittal, this amendment addresses the inclusion of the primary containment isolation valves into the TS only. It does not address the installation of the Keep-Full systems themselves since, for the RHR system, it was addressed in a 10 CFR 50.59 evaluation which has been performed by the licensee and, for the Core Spray system, it was previously addressed in the original issuance of the Final Safety Analysis Report.

DESCRIPTION

The RHR and CS Emergency Core Cooling Systems must be maintained in an operable status at all times during plant operation, and capable of automatic startup when required by plant conditions. To prevent water hammer and damage to the pump discharge piping when these high velocity pumps start, the discharge piping must be maintained completely full of water at all times. The present method of maintaining this piping full is to manually open valves from the Condensate Transfer System to the respective RHR or CS system periodically in response to level sensors placed in the high points of the piping. However, this can add to the inventory of water into the suppression chamber over a period of time due to minor valve leakage. Also, the filling evolution must be performed locally.

To simplify the filling process and reduce the potential for water addition to the suppression chamber, a low flow, low discharge pressure Keep-Full pump, operated from the Control Room, has been installed in each of the two RHR

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and each of two CS subsystems. Suction for each of the four Keep-Full pumps is from the suppression chamber, between the respective RHR or CS pump and its motor operated suppression chamber, suction valve (which is normally open). Discharge is back into the respective RHR or CS system, downstream of the RHR or CS pump discharge check valve and upstream of the normally-shut system injection valve. Therefore, each Keep-Full system is located within the isolation boundaries of its emergency system.

Each Keep-Full pump discharge is also equipped with a minimum flow line which discharges to the suppression chamber. Its purpose is to prevent pump operation against a shutoff head and to carry away pump heat. Because it discharges to the suppression chamber at a point that is not within the boundary of any present primary containment isolation valve, a check valve is installed to maintain primary containment integrity. These check valves have been designated by the licensee as containment isolation valves and the proposed amendment would incorporate them into the Primary Containment Isolation Valve table (Table 3.7-1) to indicate that they are designed as the isolation boundary.

Each of these four minimum flow discharge lines connect to the suppression chamber through existing piping which discharges below the suppression chamber water level. In the amendment, the licensee has proposed that the check valves be exempt from the leak rate testing requirements of Appendix J to 10 CFR Part 50 because the piping inside the containment is sealed with fluid from a seal system (suppression chamber water). To accomplish this, the licensee has proposed in the amendment that the four check valves be added to Table 4.7-2, which lists the primary containment isolation valves which are exempt from Type C leak rate testing.

EVALUATION

The licensee has stated that the integrity of the RHR and the CS systems will not be degraded by the addition of the Keep-Full pumps, piping, and valves since the design temperature and pressure of the Keep-Full systems is equal to the design temperature and pressure of the RHR and CS systems. Integrity of the Keep-Full systems will be verified by a hydrostatic in-service leak test in accordance with the ANSI B31.1 (1967) Code. Additional heat loads for the areas, environmental qualification considerations, and 10 CFR Part 50 Appendix R (Fire Protection) concerns have been addressed by the licensee.

The addition of the four Keep-Full pump discharge check valves to the primary containment isolation valve table will ensure that the integrity of the primary containment is maintained for each of the Keep-Full systems, since the provisions of Specification 3.7.D will then become applicable. This specification describes the operability requirements for all primary containment isolation valves and the actions which must be taken if any of them become inoperable. Based on these considerations, this change is acceptable.

Table 4.7-2, "Exception to Type C Tests," lists the primary containment isolation valves which, for a limited number of specific reasons, are not subject to the leak rate test requirements of Appendix J to 10 CFR Part 50. The licensee has stated, and the staff agrees, that these valves are typical of valves already included in the table which are sealed with suppression chamber water. Therefore, elimination of the Keep-Full valves from the testing requirements is consistent with established criteria and is acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and to a surveillance requirement. 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.

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: October 24, 1990

PRINCIPAL CONTRIBUTOR:

D. LaBarge