

February 15, 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

Dear Mr. Brons:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. 73342)

The Commission has issued the enclosed Amendment No.151 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 May 31, 1989.

The amendment clarifies the required actions which must be performed when operating with the containment cooling subsystem in a degraded mode.

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. 151 to 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
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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. 151
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 May 31, 1989, 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:

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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 151, 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: February 15, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 151

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
115a	115a
116	116
127	127

JAFNPP

3.5 (cont'd)

5. All recirculation pump discharge valves shall be operable prior to reactor startup (or closed if permitted elsewhere in these specifications).
6. If the requirements of 3.5.A cannot be met, the reactor shall be placed in the cold condition within 24 hrs.

B. Containment Cooling Mode (of the RHR System)

1. Both subsystems of the containment cooling mode, each including two RHR and two RHRSW pumps, shall be operable whenever there is irradiated fuel in the reactor vessel, prior to startup from a cold condition, and reactor coolant temperature $\geq 212^{\circ}\text{F}$ except as specified below:

4.5 (cont'd)

5. All recirculation pump discharge valves shall be tested for operability any time the reactor is in the cold condition exceeding 48 hours, if operability tests have not been performed during the preceding 31 days.

B. Containment Cooling Mode (of the RHR System)

1. Subsystems of the containment cooling mode shall be demonstrated operable by performing:
 - a. a pump operability and flow rate test on the RHR pumps per Surveillance Requirement 4.5.A.3.
 - b. a monthly operability test of the RHR containment cooling mode motor operated valves.
 - c.1 a monthly operability test on the RHRSW pumps and associated motor operated valves.
 - c.2 a flow rate test at least once every 3 months and verifying a flow rate of 4000 gpm for each RHRSW pump and a total flow rate of 8000 gpm for two RHRSW pumps operating in parallel.
 - d. During each five-year period, an air test shall be performed on the containment spray headers and nozzles.

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3.5 (cont'd)

2. Should one RHR pump of the components required in 3.5.B.1 above be made or found inoperable, continued reactor operation is permissible only during the succeeding 30 days provided that during such 30 days all remaining components of the containment cooling mode are operable.
3. Should one of the containment cooling subsystems become inoperable or should two of the RHRSW pumps become inoperable, continued reactor operation is permissible for a period not to exceed 7 days.
4. If the requirements of 3.5.B.2 or 3.5.B.3 cannot be met, the reactor shall be placed in a cold condition within 24 hr.
5. Low power physics testing and reactor operator training shall be permitted with reactor coolant temperature <212°F with an inoperable component(s) as specified in 3.5.B above.

4.5 (cont'd)

2. When it is determined that one RHRSW pump of the components required in 3.5.B.1 above is inoperable, the remaining components of the containment cooling mode subsystems shall be verified to be operable immediately and daily thereafter.
3. When one containment cooling subsystem loop becomes inoperable, the redundant containment cooling subsystem loop shall be verified to be operable immediately and daily thereafter. When two of the RHRSW pumps become inoperable, the remaining components of the containment cooling subsystem(s) shall be demonstrated to be operable immediately and daily thereafter.

3.5 BASES (cont'd)

B. Containment Cooling Mode (of the RHR System)

The containment heat removal portion of the LPCI/containment spray mode is provided to remove heat energy from the containment in the event of a loss-of-coolant accident. For the flow specified, the containment long-term pressure is limited to less than 8 psig and, therefore, is more than ample to provide the required heat removal capability.

Each subsystem of the containment cooling mode (of the RHR System) consists of two RHR Pumps, two RHR service water pumps, one heat exchanger and a flowpath capable of recirculating water from the suppression pool through the heat exchanger and back to primary containment. Either subsystem is capable of performing the containment cooling function. Loss of one RHR service water pump does not seriously jeopardize the containment cooling capability as any two of the remaining three pumps can satisfy the cooling requirements. Since there is some redundancy left, a thirty-day repair period is adequate. Loss of one subsystem of the containment cooling mode leaves one remaining system to perform the containment cooling function. The operable system is verified to be operable each day when the above condition occurs. Based on the fact that when one containment cooling subsystem becomes inoperable only

one system remains, a seven day repair period was specified.

Low power physics testing and reactor operator training with inoperable components will be conducted only when the containment cooling mode of RHR is not required for the safety of the plant.

Calculations have been made to determine the effects of the design basis LOCA while conducting low power physics testing or operator training at or below 212°F. The results of these conservative calculations show that the suppression pool water temperature will not exceed 170°F. Therefore LPCI and Core Spray Systems will not be adversely affected by the postulated LOCA.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 151 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 May 31, 1989, the Power Authority of the State of New York (PASNY or the licensee), requested changes to the Technical Specifications (TS) for the James A. FitzPatrick Nuclear Power Plant. The changes would clarify the required actions which must be performed when the Containment Cooling Subsystem of the Residual Heat Removal (RHR) System is required to be operable but is in a degraded mode.

DESCRIPTION

The containment cooling mode of the RHR System removes heat energy from the primary containment in the event of a loss of coolant accident. The system consists of two independent subsystems, with each subsystem comprised of two RHR pumps, two RHR Service Water pumps, one heat exchanger, and associated piping and valves. Either subsystem is capable of performing the containment cooling function. The RHR Service Water System has sufficient redundancy so that the loss of one RHR Service Water pump does not significantly effect the design capability of the containment cooling function.

One set of changes proposed by the licensee would delete Specification 3.5.B.2 which states that "Continued reactor operation is permissible for 30 days with one spray loop inoperable and with reactor water temperature greater than 212°F" and modify Specifications 3.5.B.3 and 4.5.B.2 by deleting reference to the RHR pumps from the TS section dealing with the Containment Cooling System. The licensee has determined, and the staff agrees, that these specifications are unnecessary since any problem which renders a Containment Cooling Subsystem inoperable would also render the associated RHR loop inoperable, and since RHR TS Sections 3.5.A and 4.5.A already addresses operability of the RHR Systems with limitations (which allows equipment to be inoperable for 7 days) which are more restrictive than the limits specified in the Containment Cooling section (which allows 30 days). Also, the change would result in increased consistency with the balance of the TS related to engineered safeguard system operability requirements, which typically allows seven days of continued reactor operation with one train inoperable. Additionally, by removing the reference to one RHR pump from Specifications 3.5.B.3 and 4.5.B.2, the requirements are clarified to indicate that the 30-day inoperable time limit continues to apply to one RHR Service Water pump only. The staff agrees that these changes improve the

clarity of the TS without adversely affecting the limits or controls related to the operability of the Containment Cooling System, by eliminating confusing and contradictory requirements. The change to this specification involves no change in the substance of the TS requirements.

Another proposed change would remove reference to the Emergency Service Water (ESW) pump and system from Specifications 3.5.B.1 and 4.5.B.1. The ESW System is a standby system which will, among other functions, supply cooling water to the drywell air coolers and the drywell equipment drain sump cooler if the normal cooling water supply (the Reactor Building Closed Loop Cooling Water System) is lost. Its functions independently of the Containment Cooling Subsystem and its operation is not necessary for the Containment Cooling System design objectives to be satisfied. For these reasons, as well as the fact that availability and requirements related to the ESW System are adequately addressed in TS Sections 3.11.D and 4.11.D, the licensee proposed removing the reference to the system from Specifications 3.5.B.1, 4.5.B.1 and the Bases discussion on page 127. The licensee has determined, and the staff agrees, that deletion of the ESW System from the Containment Cooling section of the TS will not change the controls or requirements related to the ESW System; but will result in removal of redundant specifications and overall improvement of the TS.

A proposed change to Specification 3.5.B.4 would make the specification applicable to the loss of two RHR Service Water pumps. The loss of two RHR Service Water pumps results in loss of one-half of the Containment Cooling mode, but does not render the RHR system itself inoperable. Since the original requirement addressed loss of one of the containment cooling subsystems only, the effect of the proposed change is to increase consistency by equating the loss of two RHR Service Water pumps with the loss of one-half of the Containment Cooling System. This change also conforms to the Standard Technical Specifications.

Similarly, the proposed change to Specification 4.5.B.3 would add the requirement that when two RHR Service Water pumps become inoperable, the remaining two pumps must be demonstrated to be operable immediately and daily thereafter. Since the existing specification already deals with loss of one containment cooling loop, the effect of this change would be to clarify the tests required by tying them to their effect on the Containment Cooling Subsystem.

Another proposed change to Specification 3.5.B.4 would delete the phrase "unless such subsystem is sooner made operable provided that during such 7 days all active components of the other containment cooling subsystem are operable." This deletion is appropriate since the same contingency is already contained in General Specification 3.0.B. The proposed change, therefore, removes redundancy and improves the quality of the TS.

Other changes would remove the words "redundant active" from Specification 4.5.B.2, "active" from Specification 3.5.B.3, and substitute "redundant

containment cooling subsystem" for "operable" in Specification 4.5.B.3. These changes do not change the requirements, but result in consistent use of terminology in existing specifications. They are non-technical in nature and improve the structure and readability of the specifications. The proposed changes to the Bases serve to more clearly explain the Containment Cooling Mode to agree with the proposed TS changes.

The staff has reviewed the information and descriptions provided by the licensee and determined that the proposed changes do not affect the conclusions reached in the Final Safety Analysis Report or Safety Evaluation Report. Based on this and the above analysis, the staff finds the proposed changes 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 changes to the 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 published a proposed finding that the 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.

CONCLUSION

Based on the considerations discussed above, the staff concludes 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 15, 1990

PRINCIPAL CONTRIBUTOR:

D. LaBarge