

January 2, 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 (TAC NO. 73343)

The Commission has issued the enclosed Amendment No. 149 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 and amplified by letter dated July 7, 1989.

The amendment changes the flow rate test requirements of the Core Spray System pumps to more accurately specify the test criteria.

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,

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

Enclosures:

1. Amendment No. 149 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
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. 149
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 and amplified by letter dated July 7, 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. 149, 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 - 1/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 2, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 149

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages

113

125

Insert Pages

113

125

JAFNPP

3.5 (cont'd)

4.5 (cont'd)

- | | | |
|----|--|--|
| b. | Flow Rate Test -
Core spray pumps
shall deliver at
least 4,625 gpm
against a system
head correspond-
ing to a reactor
vessel pressure
greater than or
equal to 113 psi
above primary
containment
pressure. | Once/3 Months |
| c. | Pump Operability | Once/month |
| d. | Motor Operated
Valve | Once/month |
| e. | Core Spray Header
Δp Instrumenta-
tion | |
| | Check | Once/day |
| | Calibrate | Once/3 months |
| | Test | Once/3 months |
| f. | Logic System
Functional
Test | Once/each
operating
cycle |
| g. | Testable Check
Valves | 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. |

3.5 BASESA. Core Spray System and Low Pressure Coolant injection (LPCI) Mode of the RHR System

This specification assures that adequate emergency cooling capability is available whenever irradiated fuel is in the reactor vessel.

The loss-of-coolant analysis is referenced and described in General Electric Topical Report NEDE-24011-P-A.

The limiting conditions of operation in Specifications 3.5.A.1 through 3.5.A.6 specify the combinations

of operable subsystems to assure the availability of the minimum cooling systems. No single failure of ECCS equipment occurring during a loss-of-coolant accident under these limiting conditions of operation will result in inadequate cooling of the reactor core.

Core spray distribution has been shown, in full scale tests of systems similar in design to that of the FitzPatrick Plant, to exceed the minimum requirements by at least 25 percent. In addition, cooling effectiveness has been demonstrated at less than half the rated flow in simulated fuel assemblies with heater rods to duplicate the decay heat characteristics of irradiated fuel. The accident analysis is additionally conservative in that no credit is taken for spray coolant entering the reactor before the internal pressure has fallen to 113 psi above primary containment pressure.

The LPCI mode of the RHR System is designed to provide emergency cooling to the core by flooding in the event of a loss-of-coolant accident. This system is completely independent of the Core Spray System; however, it does function in combination with the Core Spray System to prevent excessive fuel clad temperature. The LPCI mode of



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 149 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 a change to the Technical Specifications (TS) for the James A. FitzPatrick Nuclear Power Plant. The change would modify the Core Spray System pump discharge pressure test criteria given in Specification 4.5.A.1.b to state that the pumps "shall deliver a flow of at least 4625 gpm against a system head corresponding to a reactor vessel pressure of greater than or equal to 113 psi above primary containment pressure." The present criteria states that this flow must be delivered by the Core Spray System pumps "against a system head corresponding to a total pump developed head of greater than or equal to 113 psig." A corresponding change in the Bases to Specification 3.5.A is also proposed. Amplifying information was supplied by the licensee in a letter dated July 7, 1989 in response to a request for additional information.

EVALUATION

The proposed change to the wording of the core spray pump test criteria does not result in changes to the actual system setpoint or system behavior. The loss of coolant accident (LOCA) analysis does not take credit for injection of Core Spray System water into the reactor vessel until the internal pressure of the coolant has fallen to 113 psi above primary containment pressure. The value of 113 psi is derived from data contained in FSAR Figure 6.4-2, which indicates that for injection during a LOCA (Condition IV), the design assumes that the primary containment pressure is 21.7 psia (Point 1) and the reactor pressure is 134.7 psia (Point 7). Since the difference between these two pressures is 113 psi, the value forms the basis for the proposed surveillance requirement. Therefore, the proposed change is consistent with the design criteria stated in the FSAR.

This differential pressure was also assumed in the FitzPatrick SAFER/GESTR-LOCA analysis (NEDC-31317P, dated October 1986) which was submitted to support Reload 7/Cycle 8 Technical Specification changes by letter dated December 23, 1986. Therefore, the proposed change is consistent with the accident analysis.

This change in terminology serves to clarify the method for determining pump operability acceptance criteria. It results in a strengthening of the criteria above that presently stated in the TS. The proposal will ensure that, for primary containment pressures above atmospheric and up to the maximum value assumed in the accident analysis, the Core Spray System pumps are capable of performing as assumed in the accident analysis. In addition, the proposed terminology is consistent with similar terminology for the other pumps used for low pressure emergency core cooling.

For these reasons, and since the core spray pumps have always been able to meet, and administratively are required to meet, the criteria proposed in the amendment, the staff has determined that the proposed change is acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change 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 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 (3) 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: January 2, 1990

PRINCIPAL CONTRIBUTOR:

D. LaBarge