November 25, 1998

Mr. James Knubel
Chief Nuclear Officer
Power Authority of the State of
New York
123 Main Street
White Plains, NY 10601

SUBJECT: ISSUANCE OF AMENDMENT FOR JAMES A. FITZPATRICK NUCLEAR POWER PLANT (TAC NO. MA2418)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 246 to Facility Operating License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant. The amendment consists of changes to the Technical Specifications (TSs) in response to your application of August 3, 1998, as supplemented on October 20, 1998, requesting revision of a note to allow applicability of the minimum critical power ratio safety limit to Cycle 14.

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

Sincerely,

ORIGINAL SIGNED BY:

Joseph F. Williams, Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosures: 1. Amendment No. 246 to DPR-59
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION: See next page

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NAME	JWilliams:rsl		SLittle		MEMO DATED 10/28/98		SBajwa			
DATE	11/ 13 /98		11/13/98		11/ /98		11/23/98		11/20/98	

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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DATED: November 25, 1998

AMENDMENT NO. 246 TO FACILITY OPERATING LICENSE NO. DPR-59-FITZPATRICK

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. 246
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 August 3, 1998, as supplemented on October 20, 1998, 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 Appendix A, as revised through Amendment No. 246 and the Environmental Protection Plan contained in Appendix B are incorporated into Facility License No. DPR-59. PASNY shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

2. This license amendment is effective as of the date of its issuance, to be implemented before startup for Cycle 14.

FOR THE NUCLEAR REGULATORY COMMISSION

S. Singh Bajwa, 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: November 25, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 246

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Page	Insert Page
7	7

1.1 FUEL CLADDING INTEGRITY

Applicability:

The Safety Limits established to preserve the fuel cladding integrity apply to those variables which monitor the fuel thermal behavior.

Objective:

The objective of the Safety Limits is to establish limits below which the integrity of the fuel cladding is preserved.

Specifications:

A. Reactor Pressure ≥ 785 psig and Core Flow ≥ 10% of Rated

The existence of a minimum critical power ratio (MCPR) less than 1.09 shall constitute violation of the fuel cladding integrity safety limit, hereafter called the Safety Limit. An MCPR Safety Limit of 1.10 shall apply during single-loop operation.

Note: TS 1.1.A is applicable for Cycle 14 only.

2.1 FUEL CLADDING INTEGRITY

Applicability:

The Limiting Safety System Settings apply to trip settings of the instruments and devices which are provided to prevent the fuel cladding integrity Safety Limits from being exceeded.

Objective:

The objective of the Limiting Safety System Settings is to define the level of the process variables at which automatic protective action is initiated to prevent the fuel cladding integrity Safety Limits from being exceeded.

Specifications:

A. Trip Settings

The limiting safety system trip settings shall be as specified below:

1. Neutron Flux Trip Settings

a. IRM - The IRM flux scram setting shall be set at ≤120/125 of full scale.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 246 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

On August 3, 1998, as supplemented October 20, 1998, the Power Authority of the State of New York (the licensee, also known as the New York Power Authority) requested changes to the Technical Specifications (TSs) for the James A. FitzPatrick Nuclear Power Plant. The proposed changes revise a note to allow application of the safety limit minimum critical power ratio (SLMCPR) to Cycle 14. Presently, the SLMCPR applies only to Cycle 13. The supplemental information submitted on October 20, 1998, provides additional details regarding the Cycle 14 fuel cycle design. This supplemental information does not affect the NRC staff's proposed finding of no significant hazards considerations.

2.0 EVALUATION

The proposed change consists of revision of a note on page 7 of the FitzPatrick TS which applies to TS section 1.1.A. The proposed note reads as follows:

NOTE: TS 1.1.A is applicable for Cycle 14 only.

Presently, this note applies only to Cycle 13. The Cycle 14 SLMCPR in TS I.I.A is not changed from the value of 1.09 for two recirculation loop operation and 1.10 for single loop operation. These values are for reactor pressure $\geq$785 psig and core flow $\geq$10% of rated flow.

The Cycle 14 core design is a mixed core of GE12 and GE11 fuel, consisting of 560 fuel assemblies, of which there are 174 twice-burned GE11, 4 twice-burned ATRIUM-1 OA lead test assemblies, 190 once-burned GE12, and 192 new GE12 fuel assemblies.

The Cycle 14 SLMCPR analysis was performed by General Electric (GE) using the plant- and cycle-specific fuel and core parameters, NRC-approved methodologies including GESTAR-11 (NEDE-2401 1-P-A-1 1, Sections 1.1.5 and 1.2.5), a revised R-factor methodology described in NEDE-32505P, "R-Factor Calculation Method for GE-11, GE-12 and GE-13 Fuel," November 1995, and proposed Amendment 25 to GESTAR-11. The revised R-factor calculation method used the same NRC-approved equation stated in GESTAR (Topical Report NEDE-24011-P-A), except for adding the correction factors and substituting rod-integrated powers for the lattice peaking factors to account for the effects of the part-length-rod design. The proposed Amendment 25 to GESTAR-11 provides cycle-specific Safety Limit MCPRs that replace the former generic bounding Safety Limit MCPR.

The NRC staff reviewed the following: (1) the R-factor calculation method for GE-11 and GE-12 fuel, (2) the justification for the SLMCPR value of 1.09 for the Cycle 14 operation, and (3) the

relevant information provided in the proposed Amendment 25 to GESTAR-11, NEDE-24011 (which is under the staff review). The staff concluded that the Cycle 14 SLMCPR analysis for FitzPatrick using a revised R-factor calculation method in conjunction with the approved method is acceptable. The Cycle 14 SLMCPR will ensure that 99.9% of the fuel rods in the core will not experience boiling transition which satisfies the requirements of General Design Criterion 10 of Appendix A to 10 CFR Part 50 regarding acceptable fuel design limits. Therefore, the staff has concluded that the justification for analyzing and determining the SLMCPR value of 1.09 for FitzPatrick Cycle 14 operation is acceptable since (1) the approved methodologies were used, (2) the current TS limit of 1.09 is conservative with respect to the Cycle 14 calculated SLMCPR of 1.084. The proposed change from Cycle 13 to Cycle 14 to reflect the applicability of the proposed TS change to the upcoming Cycle 14 operation for FitzPatrick is also acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve 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 the amendment involve no significant hazards consideration, and there has been no public comment on such finding (63 FR 48264). Accordingly, the amendment meet 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 the amendment.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: T. Huang

Date: November 25, 1998