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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 238 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 May 30, 1996, as supplemented by letters dated October 17 and November 8, 1996, Power Authority of the State of New York (PASNY or the licensee) proposed changes to the Technical Specifications (TSs) for the James A. FitzPatrick Nuclear Power Plant. The requested changes would revise the safety limit minimum critical power ratio (SLMCPR) from 1.07 to 1.09 for two recirculation loop operation and from 1.08 to 1.10 for single recirculation loop operation to support use of GE-12 fuel for FitzPatrick Cycle 13 operation. The October 17, and November 8, 1996, submittals contained supplemental information and does not alter the proposed no significant hazards consideration determination.

2.0 EVALUATION

The licensee requested a change to the James A. FitzPatrick Nuclear Power Plant Facility Operating License in accordance with 10 CFR 50.90. The revised TS was proposed as follows:

(1) Specification 1.1.A

Due to the use of GE12, the SLMCPR is proposed to change from 1.07 to 1.09 for two recirculation loop operation and from 1.08 to 1.10 for single loop operation based on the cycle-specific analysis performed by GE for FitzPatrick Cycle 13. FitzPatrick cycle-specific fuel and core parameters were used including the actual core loading, the most limiting permissible control blade patterns, the actual bundle parameters, and the full cycle exposure range.

The staff has reviewed the proposed TS changes which are based on the analyses performed using FitzPatrick cycle-specific inputs and approved methodologies including GESTAR II (NEDE-24011-P-A-11, Sections 1.1.5 and 1.2.5), and NEDO-10985-A, January 1977, for two loop operation and found them acceptable. Because the R-factor methodology referenced in NEDE-24011-P-A-11 is not applicable to the part length GE12 fuel, an improved R-factor methodology described in NEDC-32505P, "R-Factor Calculation Method for GE11, GE12 and GE13 Fuel," November 1995 was used. The improved R-factor calculation method uses the same NRC-approved equation

stated in GESTAR (NEDE-24011-P-A) with the correction factors to account for the peaking factor effects due to the part-length-rod design. The staff has reviewed the R-factor calculation method for GE12 and finds it acceptable for application to the GE12 fuel in FitzPatrick Cycle 13 operation. Use of the above methodologies will ensure that 99.9% for Cycle 13 of the rods in the core would not experience boiling transition.

(2) Bases 1.1 and E.3

The wording "as described in Reference 1" was replaced by a separate sentence "The method of determining the Safety Limit is described in Reference 1." The wording "The boiling transition correlation and" was added to the front of the sentence "the uncertainties employed in deriving the Safety Limit are provided in Reference" under Bases 1.1 and new GE12 Compliance with Amendment 22 of NEDE 24011-P-A (GESTAR II), NEDE-32417P, December 1994 (Reference 3) was added to References list under Bases E.3. These revisions are administrative in nature to clarify the meaning of the Bases, therefore, they are acceptable.

Based on our review, we conclude that the change to the SLMCPR TS is acceptable only for the James A. FitzPatrick Nuclear Power Plant Cycle 13 operation since the changes are analyzed based on the NRC approved method using FitzPatrick cycle-specific inputs. By letter dated November 8, 1996, a footnote was added to TS page 7, Section 1.1.A, stating the applicability of the MCPR values.

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 changes a requirement 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 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (61 FR 34896). Accordingly, the 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 the amendment.

5.0 CONCLUSION

The NRC staff has reviewed the request by PASNY to revise the TS of the James A. FitzPatrick Nuclear Power Plant for the Cycle 13 operation. Based on the review, we conclude that the requested revision to SLMCPR is acceptable only for the Cycle 13 operation.

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.

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Date: November 14, 1996