

May 8, 2001

Mr. Mike Bellamy
Site Vice President
Entergy Nuclear Generation Company
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

SUBJECT: PILGRIM NUCLEAR POWER STATION - ISSUANCE OF AMENDMENT RE:
SAFETY LIMIT MINIMUM CRITICAL RATIO (TAC NO. MB1139)

Dear Mr. Bellamy:

The Commission has issued the enclosed Amendment No. 191 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment is in response to your application dated February 5, 2001, as supplemented on April 13, 2001.

This amendment changes the Safety Limit Minimum Critical Power Ratio in Technical Specification (TS) 2.1.2 from 1.08 to 1.06. In addition, administrative changes were made to TS 5.6.5, "Core Operating Limits Report (COLR)," Sections a and b.

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

Sincerely,

/RA/

Steven D. Bloom, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosures: 1. Amendment No. 191 to
License No. DPR-35
2. Safety Evaluation

cc w/encls: See next page

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OFFICIAL RECORD COPY

Pilgrim Nuclear Power Station

cc:

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ENTERGY NUCLEAR GENERATION COMPANY

DOCKET NO. 50-293

PILGRIM NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 191
License No. DPR-35

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the Entergy Nuclear Generation Company (the licensee) dated February 5, 2001, as supplemented on April 13, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations;
 - 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 3.B of Facility Operating License No. DPR-35 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 191, 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 issuance and shall be implemented prior to startup from Refueling Outage 13, including revision of the Core Operating Limits Report and applicable operating procedures.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: May 8, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 191

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

2-1
B2-2
B2-3
B2-4
B3/4.11-1
5.0-12
5.0-13

Insert

2-1
B2-2
B2-3
B2-4
B3/4.11-1
5.0-12
5.0-13

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 191 TO FACILITY OPERATING LICENSE NO. DPR-35
ENTERGY NUCLEAR GENERATION COMPANY
PILGRIM NUCLEAR POWER STATION
DOCKET NO. 50-293

1.0 INTRODUCTION

By letter dated February 5, 2001, as supplemented on April 13, 2001, Entergy Nuclear Generation Company (Entergy) submitted a request for changes to the Pilgrim Nuclear Power Station (Pilgrim) Technical Specifications (TSs). The requested changes would change the Safety Limit Minimum Critical Power Ratio (SLMCPR) in Technical Specification (TS) 2.1.2 from 1.08 to 1.06. In addition, administrative changes would be made to TS 5.6.5, "Core Operating Limits Report (COLR)," Sections a and b. The April 13, 2001, letter provided clarifying information that was within the scope of the amendment request and did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

Entergy requested a change to the Pilgrim Cycle 14 TS in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.90. The Cycle 14 core has 580 fuel assemblies consisting of 144 fresh GE14 bundles; 160 once-burned GE11 bundles; 208 twice-burned GE11 bundles; and 68 thrice-burned GE11 bundles. The proposed revision of TS 2.1.2 is described below.

2.1 TS 2.1.2

Entergy proposed revision of the SLMCPR value from 1.08 to 1.06 with the reactor steam dome pressure ≥ 785 psig and core flow ≥ 10 percent of rated core flow.

Entergy described the methodologies used to calculate the SLMCPR values for the proposed TS change in their February 5, 2001, submittal. The Cycle 14 SLMCPR analysis was performed by Global Nuclear Fuel (GNF) using the plant- and cycle-specific fuel and core parameters, and Nuclear Regulatory Commission (NRC) approved methodologies including GESTAR-II (NEDE-24011P-A-14, Sections 1.1.5, 1.1.7, and 1.2.5); NEDC-32505P-A, Revision 1; NEDC-32601P-A; and NEDC-32694P-A.

The NRC staff has reviewed the justification for the SLMCPR value of 1.06 with the reactor steam dome pressure \geq 785 psig and core flow \geq 10 percent of rated core flow using the approach stated in GESTAR-II, Revision 14. In the April 13, 2001, letter Entergy stated that the reduction in SLMCPR is due to the analysis using the NRC-approved, reduced power distribution uncertainties; and, the SLMCPR value is predicted from the correlation in terms of the MCPR Importance Parameter R-factor Importance Parameter (MIPRIP). The staff has reviewed the submittals and concluded that the SLMCPR analysis for Pilgrim Cycle 14 operation using the plant- and cycle-specific calculation in conjunction with the NRC-approved method and the justification of the reduction of SLMCPR are acceptable. Therefore, the proposed SLMCPR value of 1.06 for Pilgrim Cycle 14 operation is acceptable. Based on our review, the Pilgrim Cycle 14 SLMCPR will ensure that 99.9 percent 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 1.06 for Pilgrim Cycle 14 operation is acceptable since NRC-approved methodologies were used.

2.2 TS 5.6.5 Core Operating Limits Report (COLR)

Entergy proposed: (1) to delete TS 5.6.5.a.7, "4.2 - Reactor Core;" (2) revise the parenthetical statement in Section 5.6.5.b.1 from "the approved version ... in the COLR" to "through the latest approved amendment at the time the reload analyses are performed as specified in the COLR;" (3) delete TSs 5.6.5.2 and 5.6.5.3.

The staff has reviewed the proposed TS changes and found them acceptable because: item (1) is not a cycle-specific core operating limit; item (2) is specifically identifying the version of the approved method; and item (3) is to clean up those methods not relevant to the generic methodologies to support the COLR TS 5.6.5.a.

2.3 Bases 2.0 Safety Limits

The staff has no objection to the changes to Bases Section 2.0 because they reflect the corresponding approved methodologies used for this TS amendment.

2.4 Bases 3.11 Reactor Fuel Assembly

The changes to the Bases sections 3.11.A, 3.11.B, and 3.11.C correct the reference to TS 6.9.A.4, which was previously changed to TS 5.6.5.b (COLR) by License Amendment 177 dated July 31, 1998. The NRC has no objection to this change.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Massachusetts 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 (66 FR 13802). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (c)(10). 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: May 8, 2001