

February 2, 2005

Mr. Michael Kansler
President
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

SUBJECT: PILGRIM NUCLEAR POWER STATION - ISSUANCE OF AMENDMENT RE:
CHANGES TO TECHNICAL SPECIFICATION TABLE 3.2.C-1
(TAC NO. MC0838)

Dear Mr. Kansler:

The Commission has issued the enclosed Amendment No. 210 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station (Pilgrim). This amendment is in response to your application dated August 19, 2003, as supplemented by your letter dated March 12, 2004.

This amendment approves changes to the Pilgrim Technical Specification Table 3.2.C-1 and lowers the rod block monitor low power setpoint to conform to the value used in plant procedures and the Core Operating Limits Report.

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/

Robert J. Fretz, 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. 210 to License No. DPR-35
2. Safety Evaluation

cc w/encls: See next page

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cc w/encls: See next page

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Accession Number: ML050050486 Package: Tech Specs:

* SE input provided. No major changes made.

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OFFICIAL RECORD COPY

Pilgrim Nuclear Power Station

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ENERGY NUCLEAR GENERATION COMPANY
ENERGY NUCLEAR OPERATIONS, INC.
DOCKET NO. 50-293
PILGRIM NUCLEAR POWER STATION
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 210
License No. DPR-35

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Entergy Nuclear Operations, Inc. (the licensee) dated August 19, 2003, as supplemented March 12, 2004, 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. 210, 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 within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Darrell J. Roberts, 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: February 2, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 210

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove

3/4.2-22

Insert

3/4.2-22

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 210 TO FACILITY OPERATING LICENSE NO. DPR-35

ENTERGY NUCLEAR GENERATION COMPANY

ENTERGY NUCLEAR OPERATIONS, INC.

PILGRIM NUCLEAR POWER STATION

DOCKET NO. 50-293

1.0 INTRODUCTION

By letter dated August 19, 2003 (Reference 1), as supplemented March 12, 2004, Entergy Nuclear Operations, Inc. (ENO or the licensee) submitted a request for changes to the Pilgrim Nuclear Power Station (Pilgrim) Technical Specifications (TSs). The requested changes would revise the rod block monitor (RBM) low power setpoint (LPSP) allowable value from 29% to 25.9% in TS Table 3.2.C-1. The proposed change corrects the RBM LPSP (currently #29%) that was incorrectly inserted into the Pilgrim TSs under License Amendment No. 138 (Reference 2). However, plant procedures and the Core Operating Limits Report (COLR) (Reference 3) have enforced the correct setpoint value of #25.9% since issuance of License Amendment No. 138. The proposed amendment also makes Note 5 for Table 3.2.C-1 consistent with the value used in Pilgrim's COLR. The March 12, 2004, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 REGULATORY EVALUATION

The proposed correction to the RBM LPSP allowable value is calculated in accordance with Regulatory Guide (RG) 1.105, "Instrument Setpoints for Safety-Related Systems," and the Nuclear Regulatory Commission (NRC or the Commission) approved methodology in compliance with TS 5.6.5, "Core Operating Limits Report (COLR)."

3.0 TECHNICAL EVALUATION

During high power operation, the RBM provides protection for control rod withdrawal error events. During low power operations, control rod blocks from the rod worth minimizer enforce specific control rod sequences designed to mitigate the consequences of the control rod drop accident. During shutdown conditions, control rod blocks from the reactor mode switch shutdown position function ensure that all control rods remain inserted to prevent inadvertent criticalities. The purpose of the RBM is to limit control rod withdrawal if localized neutron flux exceeds a predetermined setpoint during control rod manipulations. An assumed function of

Enclosure

the RBM is to block further control rod withdrawal to preclude a minimum critical power ratio (MCPR) safety limit violation.

General Electric (GE) Topical Report NEDC-31312-P describes the RBM setpoint development and rod withdrawal error (RWE) analysis process. The RBM setpoints are selected to limit the change in MCPR during a RWE event so that the core-wide transient power-dependent MCPR requirements are bounding. Therefore, the RWE event is expected to remain non-limiting from cycle to cycle. Three RBM setpoints are selected from the RWE analysis to cover three different power ranges (high, intermediate, and low). The combined span of the three ranges is from 30% to 100% power. The high power range covers operation above the analytical limit power level of 85%. The intermediate power range spans between 65% and 85%, and the low power range spans from 30% to 65%. In Reference 4, the licensee stated the RBM LPSP allowable value of #29% did not include adequate margin for instrument uncertainty based on RG 1.105 and, therefore, would not ensure the RBM LPSP analytical limit of 30% for the RWE event is not exceeded.

The licensee stated in its letter dated March 12, 2004, that the input value for the RWE analysis is the LPSP analytical limit of 30%, found in GE Topical Report NEDC-31312-P, Table 4-5a. Therefore, the proposed change of the RBM LPSP allowable value from #29% to #25.9% has no impact on the RWE analysis. The RBM LPSP of 25.9% is not an input in the RWE analysis; however, it is derived from the RBM LPSP analytical limit of 30%, accounting for instrument loop uncertainties, in accordance with RG 1.105.

NEDC-31312-P also explains that the RBM setpoint in each range is a function of the operating limit MCPR (OLMCPR) used to select the setpoint. For example, Figure 4-9 of NEDC-31312-P depicts the RBM setpoint in each range for an OLMCPR of 1.20. If the OLMCPR is higher, each RBM setpoint can be raised in accordance with the RWE analysis. The bounding relationship between the analytical RBM setpoint and OLMCPR is depicted in Figure 4-8 of NEDC-31312-P. Pilgrim has established an RBM setpoint for each power range based on a low full power OLMCPR of 1.30. Pilgrim states the minimum full power OLMCPR for Cycle 15 is 1.37 as reported in the Supplemental Reload Licensing Report and the acceptability of the selected RBM setpoint is verified for each reload core design.

Pilgrim is required to operate within the core operating limits, as derived in accordance with NRC-approved methodology in compliance with TS 5.6.5. Accordingly, Pilgrim has submitted the COLR for fuel cycle 15. Section 2.3 of the COLR specifies the allowable values for the power-dependent rod block monitor trip setpoint and the LPSP specified is #25.9%. ENO also stated in Reference 1 that there is no impact on the initial Average Power Range Monitor, Rod Block Monitor and Technical Specifications (ARTS) improvement program approved by License Amendment No. 138 because Pilgrim's procedures and COLR have been enforcing the correct RBM LPSP allowable value of #25.9% since the issuance of License Amendment No. 138. Therefore, the Pilgrim ARTS program approved by License Amendment No. 138 remains valid.

3.1 NRC Staff's Conclusion

The staff finds that the proposed change is more conservative than the current requirement since the proposed RBM LPSP allowable value of #25.9% provides rod block protection over a wider power range (from #25.9% to 100%, instead of #29% to 100%), therefore enforcing RBM protection against a RWE at an even lower power level. On the basis of the above review, the

NRC staff concludes that the licensee's proposed change to the RBM LPSP allowable value from #29% to #25.9% in Note 5 of TS Table 3.2.C-1 is acceptable.

4.0 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.

5.0 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 Title 10 of the *Code of Federal Regulations* (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 (69 FR 7521). 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.

6.0 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.

7.0 REFERENCES

1. Letter from Michael A. Balduzzi (Entergy) to NRC, "License Amendment Request to Amend Technical Specifications (TS) Table 3.2.C-1," dated August 19, 2003.
2. Letter from NRC to George W. Davis (Boston Edison), "Issuance of Amendment No. 138 to Facility Operating License No. DPR-35 - Pilgrim Nuclear Power Station," dated July 1, 1991.
3. Letter from William J. Riggs (Entergy) to NRC, "Core Operating Limits Report 15A," dated May 13, 2003.
4. Letter from Michael A. Balduzzi (Entergy) to NRC, "Response to NRC Request for Additional Information on License Amendment Request to Amend Technical Specifications (TS) Table 3.2.C-1," dated March 12, 2004.

Principal Contributor: T. Ford

Date: February 2, 2005