

April 13, 2006

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

SUBJECT: PILGRIM NUCLEAR POWER STATION - ISSUANCE OF AMENDMENT
RE: REVISED ROD WORTH MINIMIZER BYPASS ALLOWANCES
(TAC NO. MC7055)

Dear Mr. Kansler:

The Commission has issued the enclosed Amendment No. 221 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated May 24, 2005, as supplemented by letter dated December 6, 2005. Specifically, this amendment revises the TSs allowances for bypassing the rod worth minimizer.

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/

James J. Shea, Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosures:

1. Amendment No. 221 to License No. DPR-35
2. Safety Evaluation

cc w/encls: See next page

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* See SE dated 12/28/05

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ENTERGY NUCLEAR GENERATION COMPANY

ENTERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-293

PILGRIM NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 221
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 May 24, 2005, as supplemented by letter dated December 6, 2005, 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 1;
 - 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. 221, 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/

Richard J. Laufer, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: April 13, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 221

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

iii
3/4.3-11
3/4.14-3
3/4.14-4

Insert

iii
3/4.3-11
3/4.14-3
3/4.14-4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 221 TO FACILITY OPERATING LICENSE NO. DPR-35
ENERGY NUCLEAR GENERATION COMPANY
ENERGY NUCLEAR OPERATIONS, INC.
PILGRIM NUCLEAR POWER STATION
DOCKET NO. 50-293

1.0 INTRODUCTION

By letter dated May 24, 2005, as supplemented by letter dated December 6, 2005, Agencywide Documents Access and Management System (Accession Nos. ML051520474 and ML053480192), Entergy Nuclear Operations, Inc. (the licensee) submitted a request for changes to the Pilgrim Nuclear Power Station (Pilgrim) Technical Specifications (TSs). The requested changes would revise the TSs allowances for bypassing the rod worth minimizer consistent with NUREG-1433, "Standard Technical Specifications - General Electric Plants, BWR/4, Revision 3" (NUREG-1433).

The supplement dated December 6, 2005, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination.

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act of 1954, as amended (the "Act") requires applicants for nuclear power plant operating licenses to include TSs as a part of the license. The TSs ensure the operational capability of structures, systems, and components that are required to protect the health and safety of the public. The NRC's regulatory requirements that are related to the content of the TSs are contained in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36 "Technical specifications." 10 CFR 50.36 requires that the TSs include items in the following specific categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls.

Pursuant to 10 CFR 50.90 "Application for amendment of license or construction permit," a licensee may apply for an amendment to its license including the TSs incorporated into the license. In determining the acceptability of the proposed changes, the Nuclear Regulatory Commission (NRC) staff interprets the requirements of the current version of 10 CFR 50.36. Within this general framework licensees may revise their current TSs provided that a plant-specific review supports a finding of continued adequate safety such that: (1) the change is

editorial, administrative, or a clarification (i.e., no requirements are materially altered); (2) the change is more restrictive than the licensee's current requirement; or (3) the change is less restrictive than the licensee's current requirement, but continues to afford adequate assurance of safety when judged against current regulatory standards.

Control rod patterns during startup conditions are controlled by the operator and the rod worth minimizer (RWM) "Control Rod Block Instrumentation", so that only specified control rod sequences and relative positions are allowed over the operating range of all control rods withdrawn to 10 percent of reactor thermal power. The sequences limit the potential amount of reactivity addition that could occur in the event of a control rod drop accident (CRDA). CRDA analyses assume that the reactor operator follows prescribed withdrawal sequences. These sequences define the potential initial conditions for the CRDA analysis. The RWM provides backup to operator control of the withdrawal sequences to ensure that the initial conditions of the CRDA analysis are not violated. Rod pattern control during reactor startup satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii). With the RWM inoperable during a reactor startup, the operator is still capable of enforcing the prescribed control rod sequence. However, the overall reliability is reduced because a single operator error can result in violating the control rod sequence.

3.0 TECHNICAL EVALUATION

If the RWM is inoperable during reactor startup, the licensee's TSs require that the licensee either (1) immediately suspend control rod movement (except by scram), or (2) they can verify movement of control rods by a second licensed operator or other qualified member of the technical staff during control rod movement. The second option is restricted only to instances when startup with the RWM inoperable has not been performed in the last 12 months.

The licensee proposed to modify the conditions of the second option which would allow the movement of the control rods if the RWM is inoperable during startup as long as (1) a second licensed operator or other qualified member of the technical staff is verifying control rod movements, and (2) the RWM inoperable has not been performed in the last calendar year or if twelve or more control rods are already withdrawn. This is essentially the same as the original TS except if there were a startup with the RWM inoperable in the last calendar year (not 12 months), the licensee could still move the control rods (with verification from another operator or staff member) as long as 12 rods are already withdrawn.

In response to NRC staff inquiries, the licensee explained that the option to continue startup under these conditions provides operational flexibility without a reduction in safety margin should the RWM suddenly become inoperable during the startup. Verifying that 12 control rods are withdrawn prior to continuing startup should the RWM become inoperable is intended to demonstrate that the RWM was operable when startup began and is still maintaining the philosophy of keeping the RWM operable as much as possible. The staff agrees with the licensee's statement that the use of the proposed option is acceptable, improves operational flexibility and unit availability, reduces undue restrictions on startup activities and does not reduce safety.

The other licensee proposed TS change would re-define the condition of the RWM being operable during startup for 12 months to the RWM being operable for the last "calendar year." In a response to NRC staff inquiries, the licensee states that this could allow startups with the

RWM inoperable in two different calendar years but less than 12 months apart. A second individual verifying the rod movements provides protection against single operator error and the purpose of the calendar year restriction helps ensure the RWM is maintained operable as much as possible. The staff agrees with this position and finds that changing the "12 month" condition to "calendar year" has little to no impact on safety. This is also consistent with the wording recommended in the improved standard technical specifications, NUREG-1433, Revision 3, LCO 3.3.2.1.

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 10 CFR Part 20 and changes SRs. 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 (70 FR 51380; August 30, 2005). 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.

Principal Contributor: V. Klein

Date: April 13, 2006

Pilgrim Nuclear Power Station

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