



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 133 TO FACILITY OPERATING LICENSE NO. DPR-35
BOSTON EDISON COMPANY
PILGRIM NUCLEAR POWER STATION
DOCKET NO. 50-293

INTRODUCTION

By letter dated August 21, 1990 (Ref. 1), as amended by letters dated November 8, 1990 (Ref. 2), and December 3, 1990 (Ref. 3), Boston Edison Company (BECo) (the licensee) proposed changes to the Technical Specifications (TS) for the Pilgrim Nuclear Power Station, Unit 1 (PNPS). The proposed changes would modify specifications having cycle-specific parameter limits by replacing the values of those limits with a reference to a Core Operating Limits Report (COLR) for the values of those limits. The proposed changes also include the addition of the COLR to the Definitions section and to the reporting requirements of the Administrative Controls section of TS, the upgrade of the Minimum Critical Power Ratio (MCPR) and administrative changes. Guidance on the proposed changes for COLR was developed by NRC on the basis of the review of a lead-plant proposal submitted on the Oconee plant docket by Duke Power Company. This guidance was provided to all power reactor licensees and applicants by Generic Letter 88-16, dated October 4, 1988 (Ref. 4).

EVALUATION

The licensee's proposed changes to the TS are in accordance with the guidance provided by Generic Letter 88-16 and are addressed below.

- (1) The Definition section of the TS was modified to include a definition of the Core Operating Limits Report that requires cycle/reload-specific parameter limits to be established on a unit-specific basis in accordance with NRC approved methodologies that maintain the limits of the safety analysis. The definition notes that plant operation within these limits is addressed by individual specifications.
- (2) The following specifications were revised to replace the values of cycle-specific parameter limits with a reference to the COLR that provides these limits.
 - (a) Specification 3.1.1 Footnote 15 and Bases for Technical Specification 3.1.

The Average Power Range Monitor (APRM) flux scram trip setting (Run Mode) in the current Technical Specification 2.1.A.1.a is relocated to new Footnote 15 in Technical Specification Table 3.1.1 and is specified in the COLR. The bases for the APRM scram trip setting are relocated to the bases for Technical Specification 3.1.

- (a) Specification 3.1.1 Footnote 15 and Bases for Technical Specification 3.1.

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- (b) Specification 3.1.B.1, Specification Table 3.2.C-2 Footnote 1 and Bases for Technical Specification 3.2.

The APRM rod block trip setting (Run Mode) in the current Technical Specification 2.1.B.1 is relocated to both Technical Specification 3.1.B.1 and new Footnote 1 in Technical Specification Table 3.2.C-2 and is specified in the COLR. The Bases for the APRM rod block trip setting are relocated to the bases for Technical Specification 3.2.

- (c) Specification Table 3.2.C-2.

The APRM rod block trip setting (refuel and startup modes) in the current Technical Specification 2.1.B.2 is relocated to Footnote 2 of Technical Specification Table 3.2.C-2.

- (d) The current Technical Specification Figure 2.i.i and the reference to this figure in current Base 2.1 are deleted because this figure contains a graphical representation of the APRM scram and rod block settings defined in the COLR.

- (e) Specification Table 3.1.1 Footnote 14.

This footnote is deleted because it contains the APRM scram trip setpoint formula definition that has been relocated to the COLR.

- (f) Specification 3.11.A.

The Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) Limits for this specification are specified in the COLR (Figures 3.1-1 through 3.1.3).

- (g) Specification 3.11.B.

The Linear Heat Generation Rate (LHGR) limits for this specification are specified in the COLR.

- (h) Specification 3.11.C.

The Minimum Critical Power Ratio (MCPR) operating limits and the MCPR Core Flow Factor (k_f) for this specification are specified in the COLR (Table 3.3-1, and Figure 3.3-1).

(i) Specification 3.11.D.

The power/flow operation map for this specification is specified in the COLR (Figure 3.4-1).

(j) Specification 5.2.

The reactor vessel core design for the specification is specified in the COLR.

- (3) Specification 6.9.A.4 is revised to add the Core Operating Limits Report to the reporting requirements of the Administrative Controls section of the TS. This specification requires that the COLR be submitted, upon issuance, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector. The report provides the values of cycle-specific parameter limits that are applicable for the current fuel cycle. Furthermore, these specifications require that the values of these limits be established using NRC approved methodologies and be consistent with all applicable limits of the safety analysis. The approved methodology is the following:

NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (the approved version at the time the reload analyses are performed shall be identified in the Core Operating Limit Report.)

NEDO-21696, "Loss of Coolant Analysis Report for Pilgrim Nuclear Power Station," August 1977, as amended. The words "as amended" shall be replaced by the version number and the date of the approval.

Finally, the specification requires that all changes in cycle-specific parameter limits be documented in the COLR before each reload cycle or remaining part of a reload cycle and submitted upon issuance to NRC, prior to operation with the new parameter limits.

On the basis of the review of the above items, the NRC staff concludes that the licensee provided an acceptable response to those items as addressed in the NRC guidance in Generic Letter 88-16 on modifying cycle-specific parameter limits in TS. Because plant operation continues to be limited in accordance with the values of cycle-specific parameter limits that are established using NRC approved methodologies, the NRC staff concludes that this change is administrative in nature and there is no impact on plant safety as a consequence. Accordingly, the staff finds that the proposed changes are acceptable.

As part of the implementation of Generic Letter 88-16, the staff has also reviewed a sample COLR that was provided by the licensee. On the basis of this review, the staff concludes that the format and content of the sample COLR are acceptable.

In addition to the changes discussed above to implement a COLR in accordance with the requirements of Generic Letter 88-16, the licensee made a number of other changes to the TS including the upgrade of MCPD Safety Limit to 1.04 that

are administrative in nature. In particular, a number of these changes have been made for clarity. We have reviewed all of these other TS changes and conclude that they are indeed administrative changes and, therefore, they are acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and/or changes to the surveillance requirements. The 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 published a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. This amendment also involves a change in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

3.0 CONCLUSIONS

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (55 FR 40457) on October 3, 1990 and consulted with the Commonwealth of Massachusetts. No public comments were received and the Commonwealth of Massachusetts did not have any comments.

We have reviewed the request by the Boston Edison Company to modify the Technical Specifications of the Pilgrim Nuclear Power Station, Unit 1 that would remove the specific values of some cycle-dependent parameters from the specifications and place the values in a Core Operating Limits Report that would be referenced by the specifications. Based on this review, we conclude that these Technical Specification modifications are acceptable.

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

4.0 REFERENCES

1. Letter (BEC0 90-101) from R. G. Bird (BEC0) to NRC, dated August 21, 1990.

2. Letter (BEC0 90-135) from (BEC0) to NRC, dated November 8, 1990.
3. Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications," dated October 4, 1988.

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