

December 29, 1983

Docket No. 50-293

Mr. William D. Harrington
Senior Vice President, Nuclear
Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199

Dear Mr. Harrington:

The Commission has issued the enclosed Amendment No. 73 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment consists of changes to the Technical Specification in response to your application dated April 5, 1983.

The amendment revises the Technical Specifications to permit operation with increased safety relief valve (SRV) setpoints to enable an increased pressure differential between operating pressure and SRV pressure setpoints.

A copy of the related Safety Evaluation is also enclosed.

Sincerely,

Original signed by/

Paul H. Leech, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:

1. Amendment No. 73 to License No. DPR-35
2. Safety Evaluation

cc w/enclosures:
See next page

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Mr. William D. Harrington
Boston Edison Company
Pilgrim Nuclear Power Station ,

cc:

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

BOSTON EDISON COMPANY

DOCKET NO. 50-293

PILGRIM NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 73
License No. DPR-35

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Boston Edison Company (the licensee) dated April 5, 1983 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 I;
 - 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. Paragraph 2.C.(2) of Facility Operating License No. DPR-71 is hereby amended to read as follows:

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2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 73, 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 its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance: December 29, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 73

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains a vertical line indicating the area of change.

Remove

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Insert

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1.2 SAFETY LIMIT

1.2 REACTOR COOLANT SYSTEM INTEGRITY

Applicability:

Applies to limits on reactor coolant system pressure.

Objective:

To establish a limit below which the integrity of the reactor coolant system is not threatened due to an overpressure condition.

Specification:

The reactor vessel dome pressure shall not exceed 1325 psig at any time when irradiated fuel is present in the reactor vessel.

2.2 LIMITING SAFETY SYSTEM SETTING

2.2 REACTOR COOLANT SYSTEM INTEGRITY

Applicability:

Applies to trip settings of the instruments and devices which are provided to prevent the reactor system safety limits from being exceeded.

Objective:

To define the level of the process variables at which automatic protective action is initiated to prevent the pressure safety limit from being exceeded.

Specification:

The limiting safety system settings shall be as specified below:

<u>Protective Action</u>	<u>Limiting Safety System Setting</u>
A. Scram on Reactor Vessel high pressure	1085 psig
B. Relief/Safety valve settings	Nominal setpoint will be selected between 1095 and 1115 psig. All valves shall be set at this nominal setpoint \pm 11 psi.
C. Safety valve settings	1240 psig \pm 13 psi



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 73 TO FACILITY LICENSE NO. DPR-35

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION

DOCKET NO. 50-293

1.0 Introduction

By letter dated April 5, 1983, Boston Edison Company (licensee) requested that the limiting safety system setting of Technical Specification Item 2.2.B of Appendix A be changed from "1095 psig \pm 11 psig" to "Normal setpoint will be selected between 1095 and 1115 psig. All valves shall be set at this nominal setpoint \pm 11 psi." This change would allow an increase of the safety/relief valve (SRV) setpoint by 20 psi and a return to normal operating dome pressure in the next cycle, while still increasing the simmer margin by 10 psi over its present value. Operating data demonstrates that an increase in the valve simmer margin (difference between normal plant operating pressure and the SRV setpoint) will reduce the probability of pilot valve leakage.

II. Evaluation

The licensee provided a study performed by the General Electric Company (GE) to evaluate the safety effects of raising the SRV setpoints by 30 psi (10 psi more than requested here). The safety analysis for Pilgrim Cycle 6 was used for determining which transients are limiting. The increase in SRV setpoint affects only those events which result in valve actuation to limit the system pressure. The generator load rejection with bypass failure is the most severe reactor isolation event. The results of the GE analysis based on an increase of 30 psi indicated that the peak pressure would be within 110% of the system design pressure and that the operating MCPR limits established are acceptable with the new setpoints.

A design basis LOCA (large break LOCA) would cause system pressure decay during the accident, and the increase in SRV setpoint would have no effect on the results. However, for small breaks, the reactor would remain pressurized until initiation of the automatic depressurization system and the increase in SRV setpoint would result in a slight increase in inventory loss through the break. The results of the small break LOCA analysis showed a 7°F increase in peak clad temperature (PCT) from 1875°F to 1882°F due to the increase of 30 psi in SRV setpoint. This PCT is still well below the 2200°F PCT limit established by 10 CFR 50.46(b)(1) and is, therefore, acceptable.

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General Electric also evaluated the effects of a 30 psi increase in SRV setpoint on the RCIC and HPCI systems and determined that they would be capable of providing adequate flow with the higher setpoint.

We have reviewed the licensee's submittal and find that the results of the GE study are appropriate for a 30 psi increase in SRV setpoint and would not constitute a significant decrease in safety margin. The requested increase of 20 psi would have less effect on the PCT than a 30 psi increase. Therefore, we conclude that the proposed amendment is acceptable.

III. Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

IV. Conclusion

We have 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 the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: C. Liang

Dated: December 29, 1983