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WILLIAM D. HARRINGTON  
SENIOR VICE PRESIDENT  
NUCLEAR

April 5, 1983

BECO. Ltr. #83-85

Proposed Change #83-3

Mr. Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Operating Reactors  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

License No. DPR-35  
Docket No. 50-293

Proposed Change to Technical Specifications

Dear Sir:

Introduction

Pursuant to Section 50.90 of the Commission's Rules and Regulation, Boston Edison Company hereby proposes the following modification to Appendix A of Operating License No. DPR-35 as shown on Attachment A. A check for the amount of \$4,000 will be forwarded under a separate cover letter in the near future.

Your immediate attention to this request would be greatly appreciated.

Very truly yours,

*W D Harrington*

Attachment

3 signed originals and 37 copies

Commonwealth of Massachusetts)  
County of Suffolk )

Then personally appeared before me William D. Harrington, who, being duly sworn, did state that he is Senior Vice President - Nuclear of Boston Edison Company, the applicant herein, and that he is duly authorized to execute and file the submittal contained herein in the name and on behalf of Boston Edison Company and that the statements in said submittal are true to the best of his knowledge and belief.

My Commission expires: *OCTOBER 21, 1988*

*Peter M. Kahler*  
Notary Public



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## Proposed Technical Specification Change

### Proposed Change

Reference is made to Pilgrim Nuclear Power Station, Unit #1 Technical Specification Appendix A, Sections 2.2, "Limiting Safety System Setting", Item 2.2.B, "Reactor Coolant System Integrity" and Table 3.11-1 "Operating Limit MCPR Values".

Change Item 2.2.B as follows:

From:

#### Protective Action

B. Relief/Safety  
valves settings

#### Limiting Safety System Setting

1095 psig  $\pm$  11 psi

To:

B. Relief/Safety  
valves settings

Nominal setpoint will be selected between 1095 and 1115 psig. All valves shall be set at this nominal setpoint  $\pm$  11 psi.

Change Table 3.11-1 "Operating Limit MCPR Values" as follows:

Operating Limit MCPR Values

$\gamma$	8 X 8	P8 X 8R
$\leq 0$	1.41	1.44
0 to 0.1	1.42	1.45
0.1 to 0.2	1.42	1.45
0.2 to 0.3	1.43	1.46
0.3 to 0.4	1.43	1.46
0.4 to 0.5	1.44	1.47
0.5 to 0.6	1.44	1.47
0.6 to 0.7	1.45	1.48
0.7 to 0.8	1.45	1.48
0.8 to 0.9	1.46	1.49
0.9 to 1.0	1.46	1.49

### Reason for Change:

There are two changes being presented in the proposed Technical Specification change. The reason for the changes are discussed separately below:

1. Steam leakage past the pilot disk of two-stage Target Rock safety/relief valves may result in degradation of valve performance. Extended operation with leakage may severely erode the disk/seat.

Operating data demonstrates that an increase in the valve simmer margin (difference between normal plant operating pressure and the valve setpoint) will reduce the probability of pilot valve leakage.

A study was performed for BECo by GE to evaluate the effect of raising the valve setpoints. The results of this study concluded that the operating limits derived for Pilgrim Cycle 6 operation are still valid for a proposed 30 psi increase in safety/relief valve (S/RV) setpoint and a 10 psi decrease in the reactor nominal operating dome pressure. (The same conditions were used to determine the MCPR limits above).

Since experience with operation at reduced dome pressure during the present cycle has shown no evidence of steam leakage, an increase of 20 psi in the S/RV setpoints is proposed to allow a return to normal operating dome pressure in the next cycle while still increasing the simmer margin by 10 psi over its present value.

2. The change in MCPR limits is necessitated by the "spectral shift" mode of operation being used in the present cycle. By using appropriate rod patterns the core has been preferentially bottom-burned during the initial part of the cycle thus burning more U235 and generating more plutonium in the core because of a generally harder spectrum. In the latter half of the cycle, power is shifted more to the top of the core burning more U235 and the generated plutonium. However, during this period, the scram curve is somewhat degraded from its normal shape thus increasing the consequences of transients. The MCPR limits must therefore be increased for operation during the latter portion of the present cycle.

The present MCPR limits are valid at this time but the new limits are estimated to be required at a cycle burnup of approximately 6000 MWD/ST which could occur about the first of May, 1983 (the exact time would require detailed analysis by GE).

The same documents which support the MCPR change also support a change in SRV setpoints. Since the new setpoints will be required for the next cycle and will also provide flexibility if SRV leakage should occur in this cycle, it is proposed that this change accompany the MCPR change.

Enclosed is a copy of Y1003J01A28 Rev. 1 "Supplemental Reload Licensing Submittal for Pilgrim Nuclear Power Station Unit 1, Reload 5" and a copy of NEDO-22159 "General Electric Boiling Water Reactor Increased Safety/Relief Valve Simmer Margin Analysis for Pilgrim Nuclear Power Station, Unit 1" for submittal. (Note that the transient results in Sections 2-2 and 2-3 of NEDO-22159 are superseded by Y1003J01A28 Rev. 1)

#### Safety Considerations

This change does not present an unreviewed safety question. These changes have been reviewed and approved by the Operations Review Committee and reviewed by the Nuclear Safety Review and Audit Committee.

Schedule of Change

This change will be put into effect upon receipt of approval by the Commission.

Fee Determination

Pursuant to 10CFR Section 170.12, Boston Edison proposes this change as a Class III.