10CFR50.90

Boston Edison

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

E. T. Boulette, PhD
Senior Vice President – Nuclear

May 1, 1996
BECo Ltr. 2.96-044

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

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

Proposed Technical Specification Changes to
Primary Containment Integrity

Boston Edison Company (BECo) hereby proposes the attached modification to Appendix A of Operating License No. DPR-35 in accordance with 10CFR50.90. The proposed changes will reflect implementation of 10CFR50 Appendix J, Option B at Pilgrim Station. This submittal includes the request to revise the TS and the implementation plan as required by Option B.

The requested changes are described in Attachment A. The implementation plan required by 10CFR50 Appendix J, Option B, V.B.2 is included in Attachment B. The revised Technical Specification pages are provided in Attachment C. Attachment D provides the existing pages marked-up to show the proposed changes.

E. T. Boulette

E. T. Boulette, PhD

ETB\MTL/br\rap96\appj

Commonwealth of Massachusetts)
County of Plymouth)

Then personally appeared before me, E. T. Boulette, who being duly sworn, did state that he is Senior Vice President - Nuclear of Boston Edison Company 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.

A017

My commission expires: March 25, 1999
DATE

James D. Keyes
NOTARY PUBLIC

JAMES D. KEYES NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS

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Attachments: (A) Description of Proposed Change
(B) Implementation Plan
(C) Amended Technical Specification Pages
(D) Marked-up Pages from Current Technical Specifications

1 signed original and 37 copies

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ATTACHMENT A
DESCRIPTION OF PROPOSED CHANGE

Background

The primary containment leakage rate testing program required by 10CFR50 Appendix J, includes performance of an Integrated Leakage Rate Test (ILRT) or Type A test, and Local Leakage Rate Tests (LLRTs) or Type B and C tests. The Type A test measures the overall leakage rate of the primary containment. The Type B test detects leakage paths and measures leakage for certain primary containment penetrations. The Type C test measures containment isolation valve leakage rates.

Appendix J testing requirements ensure leakage through the primary containment, as well as systems and components penetrating primary containment, does not exceed the allowable leakage rate values specified in the Technical Specifications (TS) or the associated Bases. Compliance with Appendix J testing requirements ensures the primary containment configuration is structurally sound and capable of limiting leakage to the rates assumed in the safety analysis. These requirements also ensure an adequate primary containment boundary is maintained during and after an accident by minimizing potential leakage paths to the environment, thereby assuring the primary containment function assumed in the safety analysis is maintained.

On February 4, 1992, the NRC published Federal Register Notice 57FR4166, presenting the initial planned actions to institute a continuing effort to eliminate prescriptive requirements that are marginal to safety while imposing significant regulatory burdens on licensees. The NRC concluded that decreasing the prescriptiveness of some regulations may improve the regulations' effectiveness by providing licensees the flexibility to implement cost-effective safety measures. The NRC determined the detailed and prescriptive technical requirements contained in some regulations could be improved and replaced with performance-based requirements and supporting regulatory guides.

In accordance with the above conclusions and the prescriptive nature of 10CFR50 Appendix J, the NRC indicated that potential modifications to Appendix J could be considered. To support an Appendix J change, the NRC used an analytical approach documented in NUREG-1493, "Performance-Based Containment Leak Test Program," to determine the impact on safety due to extending Appendix J test intervals. Based on the technical findings discussed in NUREG-1493, the NRC concluded:

- Testing intervals for Type A, B and C tests can be increased with only a marginal impact on safety and should produce significant savings in future industry testing costs.

- Testing intervals for Type B and C LLRTs can be established based on the experience history of each component.

Based upon these findings, the NRC revised Appendix J by adding Option B (60FR49495) and issued Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program" to provide a performance-based implementation plan for Appendix J, Option B.

The proposed changes incorporate 10CFR50 Appendix J, Option B, requirements into the Pilgrim Station TS.

ATTACHMENT A
DESCRIPTION OF PROPOSED CHANGE

Proposed Change

The proposed change to Surveillance Requirement 4.7.A.2.a adds "Option B" to 10CFR50 Appendix J and adds a reference to Regulatory Guide 1.163 dated September 1995. A note, denoted by an asterisk, has been added stating that the Definition 1.U is not applicable to leak rate tests. The remainder of surveillance 4.7.A.2.a has P_a replace 45 psig or "x".

Finally, the original leakage rate performance criteria in Surveillance 4.7.A.2.a has been replaced with leakage rate acceptance criteria.

The Bases have been enhanced to provide more detail of the leak rate test program that will be performed using Option B.

Reason for Change

As discussed in the Background section above, performance-based leak rate testing intervals can be increased with only a marginal impact on safety and should produce significant savings in future testing costs. This change will allow Pilgrim Station to implement this performance based testing.

10CFR50 Appendix J, Option B, V.B.3 states "The Regulatory Guide...must be included, by general reference, in the plant technical specifications." The addition of "Option B and Regulatory Guide 1.163 dated September 1995" meets this requirement of the rule.

The note "Definition 1.U is not applicable to Leak Rate Tests" has been added to Surveillance 4.7.A.2.a because the implementing guidance document NEI 94-01 (referenced in the regulatory guide) contains a 25% schedule allowance. This is an administrative change to assure that an additional 25% is not added due to the definition.

P_a represents the calculated peak containment internal pressure and is replacing 45 psig or "x" in surveillance 4.7.A.2.a for consistency with 10CFR50 Appendix J. This is an administrative change.

The performance criteria in Surveillance 4.7.A.2.a has been replaced with acceptance criteria to be consistent with the NEI 94-01 and ANSI/ANS-56.8-1995 requirements. The Containment Leakage Rate Test Program will contain the performance criteria.

The Bases associated with containment testing has been modified to include a summary description of the containment testing program.

ATTACHMENT A
DESCRIPTION OF PROPOSED CHANGE

Safety Evaluation and Determination of No Significant Hazards Considerations

The Code of Federal Regulations (10CFR50.91) requires licensees requesting an amendment to provide an analysis, using the standards in 10CFR50.92 that determines whether a significant hazards consideration exists. The following analysis is provided in accordance with 10CFR50.91 and 10CFR50.92 for the proposed amendment.

1. The operation of Pilgrim Station in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed changes do not involve any physical or operational changes to structures, systems or components. The proposed changes provide a mechanism within the TS for implementing a performance-based leakage rate test program which was promulgated by the revision to 10CFR50 to incorporate Option B into Appendix J. The TS Limiting Conditions for Operation (LCO) remain unaffected by these changes. Thus, the safety design basis for the accident mitigation functions of the primary containment is maintained. Therefore, these changes will not increase the probability or consequences of an accident previously evaluated.

2. The operation of Pilgrim Station in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

   Revising surveillance requirement acceptance criteria and frequencies does not physically modify the plant and does not modify the operation of any existing equipment. Further, the TS LCOs remain unaffected by these changes.

3. The operation of Pilgrim Station in accordance with the proposed amendment will not involve a significant reduction in a margin of safety.

   The proposed changes do not involve a significant reduction in the margin of safety, nor do they affect a safety limit, an LCO, or the manner in which plant equipment is operated. The NRC letter dated November 2, 1995, recognizes that changes similar to the proposed changes are required to implement Option B of 10CFR50, Appendix J. In NUREG-1493, "Performance-Based Containment Leak-Test Program," which forms the basis for the Appendix J revision, the NRC concludes that adoption of performance-based test intervals for Appendix J testing will not significantly reduce the margin of safety.

The proposed change has been reviewed and recommended for approval by the Operations Review Committee and reviewed by the Nuclear Safety Review and Audit Committee.

ATTACHMENT A
DESCRIPTION OF PROPOSED CHANGE

Schedule of Change

This change will become effective 30 days following BECo's receipt of the Commission's approval and will be implemented prior to the start of RFO 11, currently scheduled for February 1997.

Procedure changes necessary for an integrated leak rate test will be revised prior to the next integrated leak rate test.

ATTACHMENT B
10CFR50, Appendix J, Option B, Implementation Plan

Boston Edison Co. (BECo) intends to implement the requirements of 10CFR50 Appendix J, Option B for use in RFO 11, scheduled in 1997. 10CFR50 Appendix J, Option B, states:

"Specific guidance concerning a performance based leakage-rate test program, acceptable leakage-rate test methods, procedures, and analyses that may be used to implement these requirements and criteria are provided in Regulatory Guide 1.163."

Regulatory Guide 1.163 references NEI 94-01 and ANSI/ANS-56.8-1994. Pilgrim's leakage rate testing program will be in compliance with 10CFR50 Appendix J, Option B; the proposed TS; and Regulatory Guide 1.163, prior to implementation of the TS amendments.

Relative to implementation of the performance-based program, the following clarifications relative to the timing of procedure revisions and information stated in ANSI/ANS-56.8 and NEI 94-01 are provided.

Procedure Revisions

Procedures associated with the conduct of the Type A Integrated Leak Rate Test (ILRT) will be revised to incorporate the methodologies specified in ANSI/ANS-56.8-1994 prior to the next ILRT.

Interval Extensions

If data justifying the extension of a Type B or C test interval have not been evaluated, the test interval of 30 months as discussed in NEI 94-01 shall apply. Any Type B and C tests conducted after amendment implementation will utilize ANSI/ANS-56.8-1994 methodology.

Pilgrim Station's Inservice Testing Program, may reference the use of Appendix J testing requirements to meet ASME B&PV Code, Section XI and/or ASME Operations and Maintenance (OM) Code test requirements. This is to confirm that the test interval in these cases will be determined by ASME B&PV Code, Section XI and/or OM Code criteria and not the Option B interval extension criteria, unless allowed under published NRC endorsement or NRC approved IST program relief request(s).

NEI Recommended Practices

Sections 8.0 and 10.2 of NEI 94-01 recommend that the combined as-found leakage rates for Type B and C tests, determined on a Minimum Pathway Leakage Rate (MNPLR) basis, be $<0.60\ L_a$ when containment integrity is required. The TS requirement is that the overall leakage rate be $\leq L_a$ when primary containment integrity is required in accordance with TS 3.7.A.2.a. The TS acceptance criteria is a reflection of the safety analysis assumptions. We will maintain a running total of the as-found leakage rates (Type B and C tests) determined on an MNPLR basis for all applicable penetrations. However, BECo considers $0.60\ L_a$ to be a performance indication, not a TS Operability Limit. If $0.60\ L_a$ is exceeded, we will implement corrective measures to ensure the overall containment leakage remains $\leq 1.0\ L_a$.

ATTACHMENT B

10CFR50, Appendix J, Option B, Implementation Plan

NEI 94-01 and ANSI/ANS-56.8-1994 indicate that for a two barrier pathway, the Maximum Pathway Leakage Rate (MXPLR) is the measured leakage through the worst of the two isolation valves. If a penetration is isolated by use of one closed and deactivated automatic valve, closed manual valve, or blind flange, BECo considers the MXPLR of the isolated penetration to be the measured leakage through the closed isolation device for purposes of satisfying the as-left leakage acceptance criteria.