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WILLIAM D. HARRINGTON
SENIOR VICE PRESIDENT
NUCLEAR

May 10, 1983
BECO Letter No. 83-116

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

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

Subject: Request for Scheduler Relief Mark I Torus Internal Modifications
(Catwalk Modifications and Ring Girder/Shell Weld)

- References: (A) NRC Letter (T.A. Ippolito to A.V. Morisi) dated January 13, 1981
- (B) Boston Edison Company (BECO) Letter No. 81-203 (A.V. Morisi to T.A. Ippolito) dated August 25, 1981.
- (C) NRC Letter (D.B. Vassallo to A.V. Morisi) dated January 19, 1982.
- (D) BECO Letter No. 83-91 (W.D. Harrington to D.G. Eisenhut) dated April 14, 1983.

Dear Sir:

Reference (A) transmitted a Confirmatory Order which required modification of the Mark I Torus at Pilgrim Station. These modifications were to be completed not later than October 31, 1981, or, if the plant was shut down on that date, before the resumption of power thereafter. Substantial improvements were made in the margins of safety of the containment systems; however, it became necessary to request an extension of the Order. This request was made in Reference (B). Reference (C) subsequently modified Section V of the January 13, 1981 Order (Reference (A)) to read as follows: "May 1, 1982 for completion of the major modifications and prior to the start of Cycle 7 for the completion of the remaining modifications."

On April 14, 1983, Boston Edison Company (BECO) met with you and members of your staff to present its Long Term Program and schedule, which was subsequently transmitted to you in Reference (D). As stated during that meeting, the Long Term Program and resultant implementing schedule is a logical extension of Boston Edison Company's commitment to the safe, reliable, and economic operation of Pilgrim Nuclear Power Station. It is this commitment that provides the primary objective for the Long-Term Program:

Provide an approved plan and schedule for work at the station that meets Regulatory requirements and plant improvement needs, controls the impact of modifications on operations personnel, and effectively manages resources.

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The secondary objective is also an extension of this same commitment:

Maintain the approved plan and schedule as a working tool against which to judge performance and measure future commitments.

Realizing that a program of this magnitude could become cumbersome if not focused properly, it was decided to direct the emphasis on those issues impacting the next full cycle of operation while planning for those issues extending beyond that point with decreasing detail.

The final schedule and the scope of work to be accomplished through Refuel 7 meets the primary objectives of this program. It enhances the safe operation of the plant by balancing the improvements required by both the Regulators and our Management, while allowing the appropriate level of controls to be exercised.

The key decisions to allow the above to occur include: maintaining area manloading densities at a controllable level; focusing and detecting the organization's efforts toward a specific set of goals and schedules; and committing to a mid-cycle modifications outage.

Satisfying the secondary objective will provide the forward looking focus needed to detail and update the schedule as work is accomplished.

To accomplish the goals of our Long Term Program will require rescheduling the completion date for the torus internal modifications, which are currently ordered by Reference (C) to be completed "... prior to the start of Cycle 7...." These minor modifications are to the Torus Catwalk Extension Support Legs and the Ring Girder/Shell Weld near the T-quenchers. We believe that the completion date should be modified to February 21, 1985, and we have provided the following additional information to support this schedular relief.

All major modifications associated with the torus vent system, internal structures, and safety relief valve piping are complete. The modifications associated with the torus externals and torus temperature monitoring will be completed by January, 1984.

An evaluation of the safety margin associated with the catwalk extension support legs and ring girder/shell weld was performed prior to the start of Operating Cycle No. 6. Both the catwalk extension support legs and the ring girder to torus shell welds were shown to meet the acceptance criteria of the MKI containment Short Term Program, that is, they meet a safety factor of 2 based on ultimate strength. The grating on the catwalk extension platforms has been removed to reduce pool fallback loads.

The bounding load case for both the support legs and ring girder to shell weld is a LOCA plus SRV actuation. Analysis has shown that the catwalk extension support legs would bend due to submerged loads, which would result in strain in excess of

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yield. However, the legs would not break, but would remain in the deformed position. The catwalk extension platform would also bend when the legs bent. There would be no subsequent loads that would cause further damage or distortion of the support legs, and the suppression chamber pressure boundary would remain intact.

The ring girder to torus shell weld at the T-quencher supports has calculated stresses about 30 percent over MKI Containment Long-Term Program acceptance criteria. Although the stresses are over code allowables, they are below yield; therefore, the suppression chamber pressure boundary would remain intact and functional.

In summary, we believe an acceptable balance has been achieved between completion of the major modifications, which provide significant improvement in the safety margin, and the granting of additional time for completion of the remaining minor modifications to the torus internals, which will fully restore the originally intended safety margin.

Your attention to this item is greatly appreciated. We believe that the information provided is adequate to enable you to grant the requested schedular relief. Should you require any additional information or have any questions, please do not hesitate to contact us.

Very truly yours,

WJ Harrington