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EXECUTIVE VICE PRESIDENT

July 2, 1986

BEC0 86-089

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BWR Project Directorate #1
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

License DPR-35
Docket 50-293

Pilgrim Nuclear Power Station
Fire Protection Program

Dir Sir:

As discussed during our meeting on June 15, 1986, it is tentatively estimated that Pilgrim Station will be ready to return to service by the end of August following inspection of the Residual Heat Removal (RHR) pumps. This inspection will examine the potential for Intergranular Stress Corrosion Cracking (IGSCC) in the impeller wear rings. Due to the unexpected duration of the outage needed to complete this inspection, however, certain schedular provisions of 10 CFR 50.48 may be activated. This letter is meant to outline our understanding of 10 CFR 50.48 and our plans to resolve this issue.

Since November 1980, Pilgrim Nuclear Power Station has been equipped with an alternate shutdown capability designed to shutdown the plant in the event of a fire in the Control Room and Cable Spreading Room. The system complements the comprehensive fire protection program at Pilgrim Station and provides additional defense-in-depth to protect against the effects of fire in plant areas containing redundant divisions of safe shutdown equipment. The alternate shutdown system was installed in accordance with Staff guidelines contained in Branch Technical Position (BTP) 9.5-1 as described in the NRC safety evaluation report (SER) issued on December 21, 1978. The shutdown capability for these areas was subsequently recognized in the SER issued in November 1983 as satisfying the requirements of Appendix R.

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In November 1980, contemporaneous with Pilgrim's alternate shutdown system becoming operational, the Commission enacted 10 CFR 50.48 and Appendix R to Part 50. The rule required licensees to review the adequacy of the BTP 9.5-1 fire protection programs to determine whether additional enhancements to the measures in place would be feasible. BECo's reanalysis identified a number of modifications which would further enhance the protection of the safe shutdown capability against the effects of fire. The important aspects of our proposed modifications are in three areas: redefining the BTP 9.5-1 fire areas based on rated fire barriers, adding to our existing fire suppression systems, and rerouting certain electrical cables in other plant areas to conform with new Staff clarifications developed subsequent to the issuance of Appendix R. Many of the new features are being installed while the plant is operating; however, final termination and preoperational testing of the alternate shutdown system modifications requires the plant to be in a shutdown condition.

Subsection (d)(3) of 10 CFR 50.48 specifies that those fire protection features, including alternate shutdown capability, involving installation of modifications requiring plant shutdown be implemented before startup after the earliest of the following events, commencing 9 months or more after the date of the NRC Staff Fire Protection Safety Evaluation Report accepting such features:

- (i) the first refueling outage;
- (ii) another planned outage that lasts for at least 60 days; or,
- (iii) an unplanned outage that lasts for at least 120 days.

The Staff reviewed and approved BECo's proposals in a SER issued in November 1983. BECo subsequently initiated plant modifications with the final installation of the revised alternate shutdown system planned for Refueling Outage (RFO) #7, consistent with the requirements of 10 CFR 50.48 (d)(3)(i). This outage is now scheduled to begin in January 1987. The importance of the RFO #7 schedule and, particularly, the Appendix R alternate shutdown system modifications needs to be emphasized since they are essential elements of the Long Term Program (LTP), the Pilgrim "living schedule" approved by the Commission.

The LTP was developed to coordinate and schedule major necessary work at Pilgrim Station, whether mandated by NRC or identified by BECo and others. The program objectives are to (1) conform to regulatory requirements; (2) provide sufficient lead times for modification; (3) minimize changes for operators; (4) assure training requirements are fulfilled; (5) effectively manage financial and human resources; and (6) specify the framework for changes to developed schedules.

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The LTP reflects the understanding that fiscal and manpower resources are finite and that a limit on the onsite manpower is necessary, and integrates all presently planned work at Pilgrim Station to ensure that individual tasks are effectively scheduled and coordinated. It provides a means for new requirements to be accommodated taking into account schedule and resource constraints. In July of 1984 the Pilgrim Station Operating License was amended to incorporate the LTP as a license condition.

It is against this background that BECo wishes to advise the Commission that the LTP may be adversely affected by the circumstances of the current unplanned outage. This outage now appears to be approaching 120 days in duration. As it does, BECo's interpretation of 10 CFR 50.48(d)(3)(iii) is that startup may become conditional on an expedited completion deadline for the final Appendix R modifications. This new deadline would accelerate not only the scheduled completion of the final Appendix R modifications but most importantly the planned refueling outage, by upwards of 4 months. BECo believes that the LTP may be seriously disrupted in that the outage would begin without benefit of the preparation time needed to assure implementation of the work activities currently planned for RFO #7 and would accordingly require the rescoping and reprioritizing of the outage work plan. In addition this schedule would have Pilgrim Station out of service during the period that the northeast region historically experiences the peak electrical system demand. BECo believes that the unique circumstances of the current outage preclude rushing the completion of Appendix R modifications on an earlier schedule from that planned for almost three years.

The current outage at Pilgrim began on April 12, 1986 when the station was shutdown to investigate identified leakage in the RHR system. During the controlled shutdown, the Main Steam Isolation Valves (MSIVs) unexpectedly closed following the transfer of the reactor mode switch from "Run" to "Startup". The MSIVs subsequently failed to respond to an open signal while the reactor remained at pressure. A formal investigation was initiated to identify the root causes of this event. The individual equipment problems were separately analyzed and the necessary corrective actions have since been implemented.

While this investigation was in progress, a labor dispute arose on May 1, 1986 involving one of the contractor trade unions. This dispute resulted in a work stoppage which affected all contractor trade unions on site, including those installing the Appendix R modifications. At the time, BECo recognized the potential for this dispute to affect the RFO #7 schedule and so advised the Commission in a letter, dated May 15, 1986. At the same time, BECo also noted that a job action by BECo employees may be imminent, and that if it occurred, the RFO schedule may be seriously affected, possibly delaying it to January 1987.

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Boston Edison Company union employees contract expired on May 15, 1986. The subsequent work stoppage was the longest experienced by BECo in over a decade and continued until June 23, 1986. It delayed the return to work of the contractor trade unions. The net effect of both job actions slowed modifications and repairs at Pilgrim Station and required the reallocation of preoutage preparation resources.

Despite the labor disputes, BECo anticipated restoring Pilgrim Station to power operations upon resolution of the RHR leakage and MSIV closure problems. However, before this could be accomplished, BECo was advised of the potential for IGSCC in the wear rings of the RHR pumps. These pumps are important to providing core cooling in the event of an accident. The importance of these pumps to safe operation was an important consideration to BECo's decision to open and inspect each of the RHR pumps. Management believes that timely identification of problems and necessary repairs to these pumps prior to returning the plant to service is important to safe and reliable plant operation. Our current expectation is that this action will extend the outage until the end of August, 1986, lengthening the outage duration beyond the 120 day window of 10 CFR 50.48(d)(3)(iii).

This letter is meant to provide the Staff with early notification regarding our current situation and outline some of our considerations. We will continue to maintain close contact with the Staff and will ensure that complete information is provided as it becomes available. We currently expect to provide such additional information on or about July 11, 1986 at which time we may also offer additional proposals designed to meet the Commission's goals for the final resolution of the Appendix R issue at Pilgrim Station.

Very truly yours,

James M. Lydon