BOSTON EDISON COMPANY
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WILLIAM D. HARRINGTON
SENIOR VICE PRESIDENT
NUCLEAR

December 31, 1984
BECo 84-218

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 DPR-35
Docket 50-293

Subject: IE Bulletin 84-03: "Refueling Cavity Water Seal" dated August 24, 1984

Reference: W. D. Harrington to T. E. Murley, BECo Response to IEB 84-03, BECo 84-152 dated September 21, 1984.

Dear Sir:

Boston Edison Company response to the subject IE Bulletin 84-03 indicated that supplementary information will be provided on or before December 31, 1984. The attachment identifies our supplementary review. This completes our response to IE Bulletin 84-03.

Very truly yours,

A. L. Oxsen for

W. D. Harrington

WGL/kmc

Attachment

cc: U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Commonwealth of Massachusetts)
County of Suffolk)

Then personally appeared before me A. L. Oxsen, who, being duly sworn, did state that he is Vice President Nuclear Operations of the 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 the 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

IE11
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IE BULLETIN 84-03: REFUELING CAVITY WATER SEAL SUPPLEMENTARY REVIEW

At Pilgrim Nuclear Power Station the spent fuel storage racks are lower than the top of the lowest point between the refuel cavity and the spent fuel pool when the shield blocks and pool gates are removed. If a gross failure of the refuel cavity water seal is postulated with the spent fuel pool gates open, the spent fuel assemblies stored in the pool will not be exposed.

Low water level alarms for the spent fuel pool and the refuel cavity are provided locally and in the main control room in the event of a water loss from the rupture of the refuel bellows. As a backup, flow alarms are provided to give warning of leakage through the refuel bellows seal drain lines. Operating procedures require that upon receipt of a refuel bellows seal rupture alarm, the leak shall be confirmed, the fuel pool gates shall be closed, the refuel cavity shall be drained and an attempt to detect the leak shall be made.

Failure of the refuel cavity seal would require the highly unlikely failure of welded stainless steel components. If a fuel bundle is in transit and a gross seal failure is postulated, the fuel bundle could eventually become uncovered if no credit is given for operator action. Such an event is highly unlikely. The design of the cavity seal with its backup spring seal which would yield against the backing plate under hydrostatic pressure during a main seal failure would limit the loss of water and provide time for the operator to place the fuel assembly into a vessel core cell or into the spent fuel pool; thus providing necessary protection against bundle exposure. The fuel pool gates could then be closed and the pool level can be maintained, or if required, flooded up to the (Technical Specification) required level by any number of makeup paths utilizing water from the suppression pool, condensate storage tanks or fire water storage tanks.

In conclusion, due to significant design differences between the seal at Haddam Neck and that of PNPS supported by the availability of adequate warning systems, procedures, alternate water sources and makeup paths, the seal failure described in IE Bulletin 84-03 and the events that followed are not applicable to PNPS.