

Licensee/Facility:

Boston Edison Co.
Pilgrim 1
Plymouth, Massachusetts

Notification:

MR Number: 1-93-0103
Date: 10/08/93
SRI PC

Dockets: 50-293
BWR/GE-3

Subject: PILGRIM SHROUD INSPECTIONS

Reportable Event Number: N/A

Discussion:

At the request of the Massachusetts Attorney General (MAG), Boston Edison Company (BECo) met with the MAG today to discuss the issue of BWR core shroud cracking. BECo has not yet performed the core shroud inspection recommended by GE SIL No. 572, "Core Shroud Cracks", although their current assessment supports continued plant operation. BECo has scheduled a shroud inspection to be performed during refueling RFO No. 10 in April 1995.

Both the Pilgrim and Brunswick shrouds are made of ASTM-240 Type 304 SS (carbon content <.08%) and were manufactured by Sun Shipyard. Pilgrim's shroud sections were shop welded, with only the final shroud to reactor vessel weld performed in the field. BECo reviewed fabrication documentation and determined that the total heat input was controlled adequately such that the base metal of the shroud was not sensitized

during fabrication. Heat affected zones adjacent to welds were sensitized. Pilgrim's lifetime mean water chemistry (approx. 0.39 uS/cm) was relatively poor due to resin intrusion events, whereas Brunswick had a more severe history (approx. 0.48 uS/cm) due in part to chloride intrusion. BECo established hydrogen water chemistry at Pilgrim on a continuous basis in the Spring of 1991 which notably reduced conductivity (0.09 uS/cm for 1992). Pilgrim's shroud is also thicker (1.75 inches) than Brunswick (approx. 1.5 inches).

BECo has reviewed available documentation from previous Pilgrim reactor vessel internal inspections, and confirmed that no cracking in the susceptible area of the core shroud was identified. Core spray sparger inspections (same material type as shroud) historically performed each outage showed no cracking. Video tape pictures of portions of Pilgrim's shroud taken during recent jet pump inspections were enhanced by GE, and no shroud cracks were observed.

Regional Action:

The resident inspector staff continues to assess licensee activities related to the core shroud cracking issue.

Contact: David Kern (508) 747-0565
Eugene Kelly (215) 337-5183