10CFR50.55a

Boston Edison

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April 16, 1996
BECo Ltr. #96-035

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

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

Revised Table Related to RPV Nozzle Examinations
Pilgrim Plant Relief Request-9, Third Ten-Year ISI Program, (TAC NO. M93398)

The attachment to this letter provides a revised table in support of Pilgrim Plant Relief Request - 9 related to the reactor pressure vessel nozzle-to-shell and nozzle inner radius examinations. This revision is the result of clarifications to the original relief request discussed in a telephone call on April 3, 1996, with the NRC, Boston Edison, and the contractor, Idaho National Engineering Laboratory.

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wgl/radmisc/isirai2

Attachment: Nozzle to Vessel and Inner Radius Examinations (Revised).

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ATTACHMENT

NOZZLE TO VESSEL AND INNER RADIUS EXAMINATIONS (Revised)

(This table supersedes Enclosure #4 to BECo letter 96-009, dated February 15, 1996.
The vertical bar indicates clarifications in response to NRC/BECo telephone call dated April 3, 1996.)

The 21 nozzles addressed in this relief request have examination limitations primarily due to the interference created by the biological shield wall. Smaller diameter nozzles such as the RPV-N9A&B, and N-10 have additional limitations due to the small outside radius of the nozzle. See the attached list (Appendix I) of nozzles for % of volume examined and the reasons stated for all limitations involving each nozzle.

Note: The biological shield wall only offers a 1 inch to 1 1/4 inch clearance from the vessel outer surface. In this area, there is permanently installed insulation that is impractical to remove.

Appendix I

NOZZLES	% VOLUME EXAMINED	REASONS FOR LIMITATIONS
RPV-N1A RPV-N1B (Recirculation)	81.39% 71.39%	The biological shield wall interferes with 45° and 60° axial scan from shell plate surface scanning towards the nozzle (1/2t zone shell side). This same interference results in loss of coverage with 0° at the edge of the 1/2t zone on the shell side. For nozzle RPV-N1B an additional 10% of volume cannot be scanned due to the thermal pad that is installed. The thermal pad is approximately 2"x2" in size. The clockwise and counterclockwise scans of the inner radius of RPV-N1B-NIR results in 90% coverage due to the thermal pad. For RPV-N1A-NIR a 100% coverage is obtainable on the inner radius.
RPV-N2A-K (Recirculation)	64.24%	The biological shield wall interferes with the following: • 10% of the volume of the 1/2t zone shell side with 0° exam. • 5% of the volume of the 1/2t zone shell side with the 45° axial scan with the sound beam oriented towards the shell. • 60% loss of volume of the weld and 1/2t zone when scanning with the 45° axial towards the nozzle side. • 10% loss of volume of the 1/2t zone when scanning with the 60° axial towards the shell side. • 75% of the volume of the weld and 1/2t zone when scanning with the 60° axial from shell to nozzle side.
RPV-N4A-B (Feedwater)	98.53%	10% of the volume is not covered with the 60° axial scan when scanning from the nozzle side towards the shell due to the biological shield wall.

Appendix I (Continued)

NOZZLES	% VOLUME EXAMINED	REASONS FOR LIMITATIONS
RPV-N6A&B (Core Spray)	97.81%	The biological shield wall interferes with the following exams: • 5% of the volume with the 60° axial scan from the nozzle side towards the shell. • 10% of the volume with the 60° axial scan from the shell side towards the nozzle.
RPV-N9A&B (Jet Pump Instrumentation)	63.52%	The small outside radius of the nozzle limits the 0°, 45° and 60° scans. The nozzle is scanned on the shell side up to this radius and from the edge of the radius towards the shell side.
RPV-N10 (CRD)	82.79%	The biological shield wall interferes with the following examinations: • 10% of the volume with the 45° axial scan with the sound beam oriented towards the shell side. • 45% of the volume with the 60° axial scan with the sound beam oriented towards the shell side. The small outer radius of the nozzle also interferes with the following exams: • 5% of the volume with the 45° axial scan when the sound beam is oriented towards the nozzle side. • 20% of the volume with the 60° axial scan when the sound beam is oriented towards the nozzle side.