



Additional Cause Description and Corrective Actions

When Turkey Point Unit 3 was undergoing replacement of the steam generators, a portion of the equipment hatch sleeve was removed to install a thicker plate for supporting the movement of the steam generators through the equipment hatch. On 7/10/81, removal of this section exposed a small void in the concrete directly below the hatch. A larger portion of the sleeve was then removed to determine the extent of the void.

The original design documents were reviewed and taking the existing conditions into consideration, an explanation for the existence of the void was submitted:

The horizontal wall construction joint was near the bottom of the hatch sleeve, making the formation of air pockets difficult to prevent. Also, this area contained reinforcing steel, tendon sheathing, and strain gauge material, making it difficult to access for concrete consolidation.

A technical review was performed to determine if structural integrity, radiation shielding, or leakage protection could have been affected. Steel flanges on the inside and outside face of the wall below the hatch provide adequate radiation shielding. Calculations determined that loads on the added insert plate in the void area could be carried without exceeding allowable stress limits, assuring that the liner plate system would be leaktight. Stress distribution in the containment wall was considered and determined to be affected only in the immediate area of the void. The Structural Integrity Test performed before the initial operation of the unit showed no evidence of deformation in the area of the equipment hatch.

Because of the similarity in construction of Units 3 and 4, Unit 4 was inspected for the same defect during its steam generator repair outage. The presence of a similar void was confirmed on 10/11/82.

The conditions of the defect are like those of Unit 3. After an inspection was completed (NCR-429-82), it was determined that the technical evaluation performed on the Unit 3 void, as described above, is also applicable to the Unit 4 void.

Both concrete voids were repaired during each unit's steam generator repair outage in accordance with engineering procedures developed for restoration of design conditions and requirements of the Steam Generator Repair Report.