

CONTAINMENT SYSTEMS

CONTAINMENT STRUCTURAL INTEGRITY

LIMITING CONDITIONS FOR OPERATION

3.6.1.6 The structural integrity of the containment shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the structural integrity of the containment not conforming to the above requirements, restore the structural integrity to within the limits within 24 hours or be in at least HOT SHUTDOWN within the next 24 hours and in COLD SHUTDOWN within the following 20 hours.

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SURVEILLANCE REQUIREMENTS

4.6.1.6.1 Containment Tension. The number and location of tendons whose integrity shall be monitored shall be determined by the manufacturer following the initial construction and structural integrity tests. At one year intervals thereafter, the tendon structural integrity shall be demonstrated as:

- a. Determining that a representative sample of at least 21 tendons (6 diameters vertically and 15 diameters horizontally) with a weight between 1,243,000 (minimum) and 1,715,000 (maximum) pounds (weight must include an unlubricating cycle in which the tendon is deteriorated or otherwise if any wires or strands are broken or damaged. If the lift off force of the one tendon in the total sample population is out of the specified bounds (less than minimum or greater than maximum), an adjacent tendon on each side of the defective tendon shall also be checked for lift off force. If both of these tendons are found acceptable, the surveillance program proceeds considering the single deficiency as acceptable. More than one defective tendon out of the original sample population is evidence of abnormal degradation of the containment structure. Unless the 21 is a direct or indirect consequence of the containment structure, the weight of the tendons shall be checked during subsequent tests at the request of a representative sample of at least 9 tendons (3 diameters vertically and 3 diameters horizontally).

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SURVEILLANCE REQUIREMENTS (Continue)

- b. Receiving one wire or strand from each of the dome, vertical and hoop tendons checked for lift off form and deteriorating that over the entire length of the tendon wire or strand:
1. The tendon wires or strands are free of corrosion.
 2. There are no changes in physical appearance of the sheathing filler or greases.
 3. A minimum tensile strength value of 14,000 psi (ultimate ultimate strength of the concrete material) for all three wire or strand tendons (one from each end and one at mid-span) shall be maintained at all times. Failure of any tendon or strand to maintain a minimum tensile strength is a sign of abnormal degradation of the containment structure.

4.6.1.6.2 End Anchorage - Abnormal Deterioration - The condition of the end and mid-span anchorage shall be determined by observations, visual inspection, and by testing. Abnormal deterioration has occurred if a visual inspection shows any abnormal deterioration exterior surface of the concrete at the anchorage points or the anchorage. Inspections of the end and mid-span anchorage shall be made at least once a year. If any abnormal deterioration is observed, the containment system shall be repaired and the containment system shall be at its design capacity.

4.6.1.6.3 Linear Bleed - The amount of linear bleed from the liner plate shall be determined during the construction for each containment. Leakage rate test (reference Specification 4.6.1.5) and visual inspection of the plate and verifying no abnormal deterioration or other abnormal deterioration.

4.6.1.6.4 Reports - Any abnormal deterioration of the containment structure detected during the above required tests and inspections shall be reported to the Commission pursuant to Specification 4.6.1. This report shall include a description of the condition, the condition of the concrete (especially at the end anchorage), the inspection procedure, the tolerances or criteria, and the corrective actions taken.

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