

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**RICHMOND, VIRGINIA 23261**

January 4, 2002

United States Nuclear Regulatory Commission  
Washington, DC 20555-0001

Serial No.: 01-752  
Docket No.: 50-338  
License No.: NPF-4

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**NORTH ANNA POWER STATION UNIT 1**  
**INSERVICE INSPECTION REPORT**  
**ASME SECTION XI, SUBSECTION IWL CONCRETE INSPECTIONS**

Pursuant to 10 CFR 50.55a(b)(2)(viii)(E), Virginia Electric and Power Company (Dominion) is providing results of inspections on accessible areas and an assessment of the inaccessible areas of the Unit 1 Containment structure. These inspections were performed in August 2001 in accordance with ASME Section XI, Subsection IWL. The overall, general condition of the concrete was very good.

North Anna has received approval to use Code Case N-532, "Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000, Section XI, Division 1," which permits the submission of alternative ISI summary reports on a period (3-4-3 years) basis. The rule referenced above required the conditions found to be reported in conjunction with the ISI Summary Report (90 days following a refueling outage) per IWA-6000 of ASME Section XI, which is now no longer required as a result of the approved relief request. Therefore, the required North Anna Unit 1 Containment structure inspection results are being submitted under separate cover to maintain the 90-day reporting requirement of the rule. The inspection results and assessment are attached.

If you have any questions or require additional information, please contact us.

Very truly yours,



L. N. Hartz  
Vice President - Nuclear Engineering and Services

Attachment

Commitments made in this letter: None.

A047

cc: U. S. Nuclear Regulatory Commission  
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## **NORTH ANNA POWER STATION UNIT 1 CONCRETE CONTAINMENT STRUCTURE**

10 CFR 50.55a, Subsection (b), (viii), (E) identifies that for Class CC applications, the licensee shall evaluate the acceptability of inaccessible areas when conditions exist in accessible areas that could indicate the presence of or result in degradation to such inaccessible areas. For each inaccessible area identified, the licensee shall provide the following in the ISI Summary Report required by IWA-6000:

- (1) A description of the type and estimated extent of degradation, and the conditions that led to the degradation;
- (2) An evaluation of each area, and the result of the evaluation, and;
- (3) A description of necessary corrective actions.

All accessible areas of the Unit 1 Containment structure were inspected between August 7, 2001 and August 31, 2001 in accordance with ASME Section XI, Subsection IWL. The overall, general condition of the concrete was very good; however, six pieces of wood were discovered embedded in the concrete dome. Two of the pieces were very small and easily removed at the time of the inspections and were considered insignificant. A repair plan was developed and approved for the removal and repair of the remaining embedded wood pieces. A discussion of the degradation, evaluation, and corrective actions as a result of the other four embedded wood pieces follows:

1. After removal of one piece of embedded wood, an Engineering inspection of the area was performed. The resulting hole in the concrete surface was measured to be approximately 1 1/2" x 1 1/2" x 3/4" deep. This is similar in size to a pop-out or small spall but not caused by age-related degradation. The resulting hole size is small and within the established acceptance limits. Repair was not required.
2. After removal of the embedded wood, an Engineering inspection of the area was performed. The resulting hole in the concrete surface was measured to be approximately 3 1/2" x 2 1/4" x 2" maximum depth. Reinforcing steel bars were not exposed. The area was grout repaired in accordance with the approved repair plan.
3. After removal of embedded wood, an Engineering inspection of the area was performed. The resulting hole in the concrete surface was measured to be approximately 2" x 1 1/2" x 2 1/4" maximum depth. Reinforcing steel bars were not exposed. The area was grout repaired in accordance with the approved repair plan.
4. An embedded wood piece 1 1/2" x 1 1/2" extended through the concrete dome to the steel liner. After removal of the wood, the liner was cleaned, examined and UT thickness measurement verified no loss of design liner

thickness. The concrete surface within the hole was examined and no reinforcing steel bars were exposed. The area was grout repaired in accordance with the approved repair plan.

These pieces of embedded wood appear to have been left in place from the original wooden forms used for the construction of the Containment structure. This is not an age-related degradation mechanism. Structural integrity and leak-tightness were not compromised. Repair grouting was used only to restore concrete cover protection. A containment pressure test was not required. If similar conditions were to exist in the inaccessible areas, structural integrity and leak-tightness would not be compromised.