

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

August 21, 1985

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WBRD-50-391/85-26

U.S. Nuclear Regulatory Commission
Region II

Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

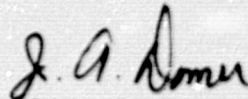
WATTS BAR NUCLEAR PLANT UNIT 2 - FAILURE OF COATING ON CONTAINMENT VESSEL
INTERIOR - WBRD-50-391/85-26 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Al Ignatonis on July 27, 1985 in accordance with 10 CFR 50.55(e) as
NCR WBN 6144. Enclosed is our final report.

If you have any questions concerning this matter, please get in touch with
R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



J. W. Hufham, Manager
Licensing and Risk Protection

Enclosure

cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 2
FAILURE OF COATING ON CONTAINMENT VESSEL INTER.

WBRD-50-391/85-26

NCR WBN6144R0

10 CFR 50.55(e)

FINAL REPORT

Description of Deficiency

The interior of containment from azimuth 0° to 360° at elevations 819 through 830 demonstrated coating failure due to poor adhesion, delamination, excessive dry film thickness (dft), peeling, and cracking.

The apparent cause of this deficiency was due to the improper application of an additional coat of carbozinc 11 inorganic zinc to the cured initial coat to obtain the minimum dft of coating. The second coat was apparently dry sprayed or applied under environmental conditions adverse to proper curing and was applied with an excessive dft.

Safety Implications

Failure of the coating on the containment vessel interior and its subsequent flaking off in sufficient quantities to inhibit adequate flow into the screens at the inlet to the containment spray and residual heat removal (RHR) systems can create a condition adverse to the safe operation of the plant.

Corrective Action

The coating was removed to solid substrate and recoated as follows:

Using side grinders with 60-grit-silicon carbide paper, the soft and poorly adhering inorganic zinc paint was removed leaving approximately 0.75-mil-zinc coating over the steel. The surface was then vacuumed, washed with solvent, and coated. The carbozinc 11 was thinned 80 percent with carboline 33 thinner.

The coating now has an acceptable dft with a majority of the dft readings being in the 2.5 to 3.5 mil range. Elcometer adhesion tests have been performed and are now within the acceptable range.

To prevent recurrence, all individuals who are protective coating applicators are being recertified in accordance with quality control instruction (QCI) 2.13. The recertification is to be complete no later than May 6, 1986. All coating inspectors have been certified by the Singleton Material Laboratory within the last year.