

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

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October 10, 1985

BLRD-50-438/85-17

BLRD-50-439/85-17

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:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - INADEQUATE CONCRETE COVER FOR GROUTED  
ANCHOR INSTALLATIONS - BLRD-50-438/85-17, BLRD-50-439/85-17 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector  
Al Ignatonis on May 20, 1985 in accordance with 10 CFR 50.55(e) as NCR 4156.  
This was followed by our first interim report dated June 13, 1985. Enclosed  
is our final report which concludes that we no longer consider the  
requirements of 10 CFR 50.55(e) applicable.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*J. W. Hufham*  
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  
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2  
INADEQUATE CONCRETE COVER FOR GROUTED ANCHOR INSTALLATIONS  
BLRD-50-438/85-17 AND BLRD-50-439/85-17  
NCR BLN 4156  
10 CFR 50.55(e)

FINAL REPORT

Description of Deficiency

Some seismic pipe supports have been installed with anchor bolts in violation of General Construction Specification G-32 [implemented onsite by Bellefonte Nuclear Plant (BLN) Quality Control Procedure (QCP) 2.8]. Appendix D of G-32 requires that in large holes or chipped out areas where grouted anchors are used, the clear distance of the existing concrete behind the anchor bolthead is at least three nominal bolt diameters for individual anchors and six nominal bolt diameters for multiple anchors.

In some instances, grouted anchors have been installed in holes chipped through a wall or floor slab without providing the required three or six bolt diameters of concrete cover beyond (behind) the embedded end of the anchor bolts.

Safety Implications

A complete documentation review of grouted anchors installed in large holes or chipped out areas was performed by the Office of Construction (OC). As a result of this review, the three seismic pipe support anchorages listed below were found to be in violation of G-32, Appendix D clear distance requirements:

OVF-MPHG-0228  
ISV-MPHG-1048  
2SV-MPHG-2048

Support OVF-MPHG-0228 was reviewed for adequacy and found acceptable for the loading conditions. The other two support anchorages were tested by preloading to 90 percent of their minimum specified yield capacity. No slippage of the anchorages was observed; and, therefore, no additional corrective action is required. Since this condition could not have adversely affected the safe operation of the plant, TVA no longer considers the requirements of 10 CFR 50.55(e) applicable.