

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

NRC REGION
ATLANTA, GEORGIA

March 15, 1983

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BLRD-50-438/81-47
BLRD-50-439/81-50

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - TOLERANCE FOR TUBULAR STEEL CABLE
TRAY HANGERS - BLRD-50-438/81-47, BLRD-50-439/81-50 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
R. V. Crlenjak on July 16, 1981 in accordance with 10 CFR 50.55(e) as
NCR 1478. This was followed by our interim reports dated August 14 and
November 9, 1981 and January 21, April 14, May 24, July 26, and November 5,
1982. Enclosed is our final report.

TVA does not now consider the subject nonconforming condition adverse to
the safe operation of the plant. Therefore, TVA will amend its records to
delete the subject nonconformance as a 10 CFR 50.55(e) item.

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

L. M. Mills
L. M. Mills, Manager
Nuclear Licensing

Enclosure

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

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
TOLERANCE FOR TUBULAR STEEL CABLE TRAY HANGERS
BLRD-50-438/81-47, BLRD-50-439/81-50
10 CFR 50.55(e)
NCR 1478
FINAL REPORT

Description of Deficiency

Due to a misunderstanding between the Bellefonte design project and Bellefonte field forces, the field forces fabricated and installed cable tray hangers outside the tolerances allowed by the seismic analysis.

As a result of TVA's investigations to determine the cause of this deficiency, additional related deficiencies were discovered. Consequently, since the disposition of the deficiencies cited in NCR 1478 has already been approved by TVA, nonsignificant NCR 2056 was initiated to document the additional deficiencies.

The root cause of these nonconformances was the failure of the Bellefonte Design Project to point out in correspondence the tolerances listed on the drawings and the failure of the Bellefonte Construction Project to install the supports in accordance with the drawings.

Safety Implications

The disposition of NCR 1478 involved the resolution of two concerns. The first concern involved the evaluation of a list of supports which were outside the limits of the tolerances in effect at that time. The second concern involved the establishment of new installation and location tolerances for cable tray supports. First, the list of supports submitted by the field was reviewed and the results of this study revealed that three supports required modification. All other supports were acceptable as installed. Secondly, TVA has established that for cable tray supports an installation (i.e. lengthening or shortening) tolerance of ± 1 inch and a location tolerance of ± 2 inches is acceptable.

To confirm installation in accordance with issued drawings, a random sampling of remaining cable tray supports in the auxiliary, control, and diesel generator building was inspected. This inspection revealed that two supports out of 197 were installed with an installation tolerance greater than ± 1 inch. This sampling and the deficiencies are recorded in NCR 2056. A failure rate of 2 in a sample of 197 provides a better than 95-percent confidence level that less than 5 percent of all the cable tray supports installed to date are outside the established tolerances. In addition, the two supports that deviated from the tolerances were analyzed and dispositioned use as-is.

In accordance with the Bellefonte inspection acceptance criteria, all supports located outside the ± 2 inch location tolerance have been approved and documented by TVA's Division of Construction electrical engineering supervision during construction. These were investigated and dispositioned by TVA's Division of Engineering Design in NCR 1478.

Consequently, TVA has determined that there is no condition adverse to the safety of operations of the plant. Therefore, we no longer consider 10 CFR 50.55(e) to apply to this condition.