

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

February 12, 1982



U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - FILLET WELD MISSPECIFICATION -
NCR BLN BLP 8007 - SIXTH INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. W. Wright on November 7, 1980 in accordance with 10 CFR 50.55(e). This was followed by our interim reports dated December 3, 1980 and January 19, April 9, July 6, and September 23, 1981. As discussed with R. V. Crlenjak by telephone on February 9, 1982, our response was delayed. Enclosed is our sixth interim report. We expect to submit our next report by June 23, 1982. This deficiency has also been reported for every TVA nuclear plant.

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 Regulation and Safety

Enclosure

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

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ENCLOSURE
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
FILLET WELD MISSPECIFICATION
NCR BLN BLP 8007
10 CFR 50.55(e)
SIXTH INTERIM REPORT

Description of Deficiency

In a number of Bellefonte Nuclear Plant systems, fillet welds were specified, in lieu of beveled groove welds, to connect members whose angle of intersection is outside the limits for fillet weld application as stipulated in the American Institute of Steel Construction (AISC) Standards. The AISC Standard states that the welds which are made joining members at an angle of 60° or less are to be defined as acute angle welds. Acute angle welds should be specified as beveled groove welds according to AISC.

Our investigation has identified violations of the 135-degree-maximum, 60-degree-minimum angle permitted for intersecting members of prequalified fillet-welded skewed tee joints. This requirement is imposed by the American Institute of Steel Construction (AISC) Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings and the American Welding Society (AWS) D1.1 Structural Welding Code.

Interim Progress

TVA has fabricated representative mockups of the subject deficient welds. TVA's Singleton Laboratory has been authorized to perform destructive tests on these mockups and has provided TVA with the results of these tests. Review of the test results is continuing.

Engineers and designers have been alerted to the AISC/AWS requirements for limiting angles for skewed tee joints.

General Construction Specification G-29C has been revised to clarify construction requirements for skewed T-joints.