

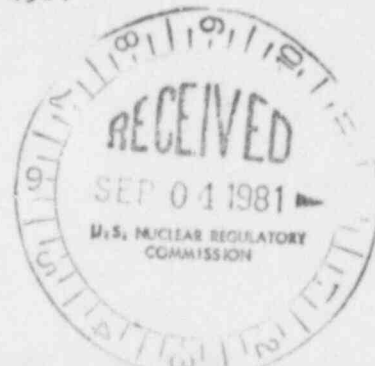
TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

August 27, 1981

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303



Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - QA BREAKDOWN - DEFICIENT FILLET
WELDS - NCR'S 1188, 1203, AND 1563 - SIXTH INTERIM REPORT

On May 7, 1980, R. W. Wright, NRC-OIE Region II, was informed that nonconformance report (NCR) 1188 was determined to be reportable in accordance with 10 CFR 50.55(e). Since that time, related NCR 1203 has been determined to be reportable in accordance with 10 CFR 50.55(e). This was followed by our interim reports dated June 6, September 19, and December 15, 1980 and June 10 and March 6, 1981. Some of the affected welds are inaccessible for inspection; therefore, NCR 1563 has been written to disposition these welds. Enclosed is our sixth interim report. We expect to submit our next report by December 1, 1981.

If you have any questions concerning this matter, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills
L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Jr., 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
QA BREAKDOWN - DEFICIENT FILLET WELDS
NCR'S 1188, 1203, AND 1563*
SIXTH INTERIM REPORT

Description of Deficiency

Numerous fillet welds located in various safety-related systems do not meet ASME Code and/or G-29 requirements because of inadequate fillet leg size or theoretical throat dimensions. Deficient welds have been found in socket weld fitting, socket weld flange, and component support welds. This quality assurance problem is attributable in part to the procedure for fillet weld inspection because it did not accurately reflect the applicable ASME Code requirements. Additional problems with socket weld flanges arose because, at the time the procedures were written, G-29M requirements did not specify socket weld flange requirements. G-29M was revised on March 21, 1979, to include socket weld flange requirements. However, TVA failed to incorporate this change into its site quality control procedures. Fillet weld gauges not being available to assist the inspectors in determining the adequacy of a weld also contributed to the problem.

Interim Progress

NCR's 1188 and 1563

A total of 10,140 socket welds in 43 plant systems under the scope of NCR 1188 were eventually identified by Bellefonte. Of this amount, 9,451 were reinspected, 673 were embedded, and 16 more are inaccessible for inspection. NCR 1563 was recently written to disposition these inaccessible welds.

The total rejectable of those inspected was 668 welds equating to a total reject rate of 7.1 percent. Only 66 welds (0.7 percent) were undersized by more than 1/16". A breakdown on those welds found rejectable follows:

<u>Undersized Throat</u>	<u>Undersized Leg</u>	<u>Undersized Leg & Throat Together</u>
318	271	79

Rework has been completed on almost all of the welds found rejectable. Completion of rework on the remaining accessible welds will be completed by our next report.

The 673 embedded and 16 inaccessible welds will be evaluated and dispositioned by TVA's Division of Engineering Design (EN DES) under NCR 1563.

With regard to recurrence control, Bellefonte sample inspected 540 socket welds that were made sometime after completion of inspector training and implementation in the use of fillet weld gauges. No rejectable welds were found.

NCR 1203

Two hundred randomly selected hangers of the over 8,500 identified under the scope of this NCR have been comprehensively reinspected.

Information regarding this reinspection will be forwarded to EN DES for engineering evaluation.

*NCR's 1188 and 1563 deal with socket weld fitting and socket weld flange welds, and NCR 1203 deals with component support welds.