

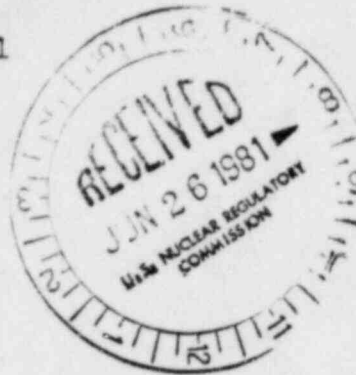
14-00000

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

June 22, 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 - CONSTRUCTION QA AUDIT DEFICIENCY
SAFETY-RELATED NON-ASME WELD INSPECTION BN-W-80-08 - FINAL REPORT

On September 4, 1980, R. W. Wright, NRC-OIE Region II, was informed that the subject nonconformance was determined to be reportable in accordance with 10 CFR 50.55(e). This was followed by our interim reports dated October 20, 1980, March 6, and May 5, 1981. Enclosed is our final report. Although this deficiency was originally written on Bellefonte, it has been determined to be generic to all TVA plants under construction.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Director (Enclosure) ✓
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

IE27
s
1/1

5

8106290408

ENCLOSURE
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
CONSTRUCTION AUDIT DEFICIENCY SAFETY-RELATED NON-ASME WELD INSPECTION
10 CFR 50.10(e) CONSTRUCTION QA AUDIT BN-W-80-08
FINAL REPORT

Description of Deficiency

Contrary to the FSAR Section 17.1A.9 requirements, TVA's Office of Engineering Design and Construction (OEDC) QA Program for Control of Special Processes does not contain written measures to ensure that safety-related welding receives all inspections/verifications required by Codes, standards, and 10 CFR 50 Appendix B, commitments. As a result, certain categories of safety-related welding, have/are not receiving the inspections required by ANSI 45.2.5-1974 to verify quality. The required inspections not being performed include:

- Verification of welding procedure and compliance thereto
- Verification of welder qualification
- Verification of joint fit up
- Verification of correct filler metal usage

Although this deficiency was originally written on Bellefonte Nuclear Plant, it has been determined to be generic to all TVA Nuclear Plants under construction.

Safety Implications

TVA's review of commitments and compliance with those commitments has been completed. This review has shown that had the deficiency remained uncorrected it could not have affected adversely the safety of operations of the plant.

Corrective Action

TVA's review and evaluation of the welding program and procedures, as related to the audit deficiency BN-W-80-08 has been completed. This evaluation was conducted in the following manner:

1. Identify the exact requirements of section 5.5 of ANSI N45.2.5 and the four items of deficiency as reported to the NRC, namely:
 - a. Verification of welding procedure and compliance thereto.
 - b. Verification of welder qualification.
 - c. Verification of joint fit up.
 - d. Verification of correct filler metal usage.
2. Identify the quality control procedures and how safety-related non-ASME welding and inspection are performed and documented.
3. Compare requirements of 1 and 2 for compliance and/or noncompliance with TVA commitments.

TVA's detailed review and investigation revealed the OEDC QA program is meeting the intent of our commitment to ANSI N45.2.5. The substance of the deficiency depends on the interpretation of paragraph 1.2 (Applicability), and paragraph 1.3 (Responsibility) of ANSI N45.2.5.

TVA fully complies with the above items la., lb., and ld. Regarding item lc., it is TVA's position that the individual requirements of the standard be applied depending upon the nature and scope of the work to be performed and the importance of the item or the service involved. The specific requirements for quality control would be reflected in the drawings and specification applicable to the work to be performed. It is the intent of TVA that specific requirements for preweld joint fit-up inspection and documentation be called for in the construction drawings on a case-by-case basis as required by the engineer. However, it has been the usual TVA practice to require more rigorous inspection methods such as radiographic testing, ultrasonic testing, liquid penetrant examination, and dry magnetic particle examination in lieu of specifying joint fit-up inspection.

This investigation did reveal that the design engineer's responsibility in implementing ANSI N45.2.5 needs clarification. The responsibilities of design engineers are being clarified to emphasize that item lc. be considered and if required on a particular feature, be specified on construction drawings, in construction specifications, or procurement specifications. This clarification will be accomplished by issuing a memorandum by June 30, 1981 and will be incorporated into TVA's Engineering Procedures by September 30, 1981.

Based on the foregoing, TVA considers the generic issue of compliance resolved.