

Docket No.: 50-390

Tennessee Valley Authority
ATTN: Mr. S. A. White
Manager of Nuclear Power
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Gentlemen:

SUBJECT: REPORT NOS. 50-390/87-09

The NRC welding team conducted an inspection May 25 through 29, 1987, at the Watts Bar Nuclear (WBN) facility. The NRC welding team consisted of members of the Office of Special Projects (OSP) and three consultants. The team reviewed the information contained in the EG&G reports, interviewed a number of EG&G welding and nondestructive examination inspectors, and reviewed ongoing corrective actions related to selected welding issues.

The NRC welding team inspection results indicated no significant deviations from the procedures established by TVA's welding reinspection program. The NRC team found the WBN reinspection effort had been conducted in accordance with the approach outlined in the WBN welding program. However, the NRC welding team identified several areas of concern that need to be addressed by TVA in its ongoing weld reinspection program. Enclosure 1 identifies these items and provides an executive summary of the results and conclusions of this inspection. The enclosed inspection report (Enclosure 2) details the scope, objectives, and findings of the NRC inspection team and identifies the areas examined during the inspection.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room. If there are any questions concerning this inspection, please contact this office.

Sincerely,

Stewart D. Ebnetter, Director
TVA Projects Division
Office of Special Projects

Enclosures:

1. Executive Summary
2. Inspection Report No. 50-390/87-09

cc w/enclosures:

- J. G. Keppler
- S. D. Ebnetter
- G. G. Zech
- J. Zwolinski

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DATE	: 7/22/87	: 7/22/87	: 7/27/87	: 7/28/87	:	:

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Mr. S. A. White
Tennessee Valley Authority

Watts Bar Nuclear Plant

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Honorable Dan Wade
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Dayton, Tennessee 37321

EXECUTIVE SUMMARY

An NRC welding team conducted an announced inspection at the Tennessee Valley Authority (TVA) Watts Bar Nuclear Power Station (WBN), Unit 1, from May 25 through 29, 1987. The team reviewed the TVA reinspection effort at the WBN to determine the adequacy of that effort.

The NRC team noted no significant deviations from the procedures established by TVA's welding reinspection program and found that the WBN reinspection effort was conducted in accordance with the approach outlined in the WBN welding program. However, the NRC welding team identified several areas of concern that TVA needs to address. These concerns include the following:

- (1) TVA's review of the weld deficiencies identified in shear-lug-to-pipe welds did not include safety-related ANSI B31.1 welds. TVA must review an adequate number of safety-related ANSI B31.1 shear-lug-to-pipe welds to provide the required basis to assess this area.
- (2) The current engineering reviews of deviation reports did not include the review of deficiencies identified in the "999" and WTG reports. These two reports document additional welding deficiencies found by EG&G and TVA inspectors, respectively. These reviews also did not consider the cumulative effects of all identified deficiencies related to the affected weld connections. TVA must ensure that engineering reviews of weld deficiencies include the deficiencies identified in the "999" and WTG reports and the cumulative effects of all identified deficiencies related to the affected weld connections.
- (3) The expanded sample of pipe welds, group A, did not include a sufficient number of stainless-to-carbon-steel welds. The sample group had been expanded because a crack was found in a stainless-to-carbon-steel weld. TVA must review an adequate number of stainless-to-carbon-steel welds to provide the required basis to assess this problem.
- (4) Group 254A was incorrectly classified as being related to electrical welding when in fact it should have been classified as ASME pressure-retaining containment welding. TVA must ensure that any identified weld deviations are considered and addressed in accordance with the requirements of Section III of the ASME Code.
- (5) TVA's re-review of radiographs identified welds that had been radiographed twice using different weld identification numbers or two different sets of film that had been assigned to one weld. TVA must investigate these cases to determine whether they represent isolated incidents or whether the same condition also may apply to other welds.