

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

April 15, 1982

WERD-50-390/81-37

WERD-50-390/81-36

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:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - INCOMPLETE DRAWING CONTROL COMPUTER
PRINTOUT - WERD-50-390/81-37, WERD-50-391/81-36 - REVISED FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on March 31, 1981, in accordance with 10 CFR 50.55(e) as NCR WEN MEB 8102. Our first interim report was submitted on April 30, 1981; and our final report was submitted on June 9, 1981. As discussed with Inspector R. Crlenjak on October 13, 1981, TVA determined that further interim reports were necessary to resolve this item. Subsequently, our third interim report was submitted on November 13, 1981 and our fourth interim report was submitted January 27, 1982. Enclosed is our revised final report.

If you have any questions, please get in touch with R. H. Shell at
FIS 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
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
INCOMPLETE DRAWING CONTROL COMPUTER PRINTOUT
NCR WEN MFP 8102
WBRD-50-390/81-37, WBRD-50-391/81-36
10 CFR 50.55(e)
REVISED FINAL REPORT

Description of Deficiency

TVA contract administration personnel utilize a computer printout, which lists all pertinent hanger drawings, as a tool to track vendor drawing submittals for piping greater than 2 inches in piping systems supplied under the principal piping contract (74C38-83015). The printout is identified as the Materials Management System (MAMS)-Engineering Requirements Planning RPT4147, Status Report of Technical Information-Watts Bar. In December 1980, TVA started using the MAMS printout as the controlling document for construction drawing control. Watts Bar construction personnel were instructed to use the MAMS printout because the Drawing Information System (DIS) printout did not list all of the hanger drawings supplied by Bergen-Paterson (B-P) because some of the drawing sepia's were not of microfilmable quality. TVA does not formally accept such drawings until the quality of the sepia is improved to a microfilmable quality. Earlier, it was discovered that the printout was missing some hanger drawings, and some drawings which were listed did not have any approval status designated. TVA design personnel are required to input information into the MAMS to keep an up-to-date printout of all hanger drawings. Apparently, this was not done, and incomplete printouts were issued to construction to be used as the controlling document. The cause of this deficiency was a breakdown in TVA's system of inputting information into the MAMS printout.

After TVA decided that there was no reliable method available to update and correct the MAMS printout, they changed the drawing control document for use by construction from the MAMS printout to the B-P drawing index sheets. The B-P drawing index is maintained by B-P engineering personnel and is submitted to TVA with each B-P engineering submittal package. The index is revised each time a drawing listed on the index sheets is revised. After using the B-P index, it was determined that the index was not QA verifiable. TVA decided to return this nonconformance to an interim status because of the need to change the original corrective action in order to develop a program that is QA verifiable.

Safety Implications

Since the MAMS printout was not up to date, and is used by construction as the drawing control document, construction personnel could have used outdated drawings to install hangers. If the condition had gone uncorrected, hangers of deficient design could have been installed, such as hangers lacking seismic qualification. Some piping systems involved are essential safety-related systems. This condition could have adversely affected the safe operation of the plant.

Corrective Action

TVA has compiled a final index of all B-P hanger drawings and the latest approved revision of each of the drawings. This index, the B-P Drawing Approval Index, is now the controlling document for construction until such a time as the DIS printout is updated. The following steps have been taken to correct this deficiency:

1. The B-P Drawing Approval Index was generated, checked, and verified in a manner which provides a QA verifiable document.
2. The index lists the TVA letter number that approved the latest revision of each B-P drawing that has not been placed under design control by TVA. This provides a source to verify the approval of each hanger.
3. The original for each drawing has been marked with a stamp stating "MEB verified as approved" for all drawings that have not been placed under design control by TVA. Before any drawing originals are stamped, TVA's Division of Engineering Design Mechanical Engineering Branch (MEB) is verifying that these originals match the index. All drawings that have been placed under design control by TVA have been formally revised by TVA and have had a TVA revision block added to the drawing original which becomes the approval authorization.
4. After all B-P drawings (that TVA has not taken control of) have been stamped, the drawing will be microfilmed. All previous microfilm will be marked superseded. The microfilm for these drawings, along with the microfilm for the drawings that have been placed under design control, will be entered into the DIS.
5. The DIS will become the official document for control of the B-P hanger drawings when it has been updated and verified to ensure its reliability.