



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

William J. Museler
Site Vice President, Watts Bar Nuclear Plant

JUL 26 1993

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of the Application of)
Tennessee Valley Authority) Docket Nos. 50-390
50-391

WATTS BAR NUCLEAR PLANT (WBN) - UNITS 1 AND 2 - NRC INSPECTION REPORT NO. 390, 391/93-38 REPLY TO NOTICES OF VIOLATION

The purpose of this letter is to provide a reply to Notices of Violation 390/93-38-01 and 390/93-38-03 cited in the subject inspection report dated June 24, 1993. The Notice of Violation 390/93-38-01 identifies the failure by TVA to identify a gamma plug seal weld on the weld map and to document the welding on a weld data sheet. Notice of Violation 390/93-38-03 identifies a failure by TVA to perform work on a safety-related pipe support using approved work instructions. The enclosures to this letter address the specific conditions described in the inspection report and the corrective actions taken by TVA.

Should there be any questions regarding this submittal, please telephone P. L. Pace at (615) 365-1824.

Very truly yours,

William J. Museler

Enclosures
cc: See page 2

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cc (Enclosures):

NRC Resident Inspector
Watts Bar Nuclear Plant
P.O. Box 700
Spring City, Tennessee 37381

Mr. P. S. Tam, Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852

U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNIT 1
RESPONSE TO NRC'S JUNE 24, 1993 LETTER TO TVA
NRC VIOLATION 390/93-38-01

DESCRIPTION OF VIOLATION 390/93-38-01

10 CFR Part 50, Appendix B, Criterion V, requires that, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings....."

Site Procedure SSP-7.50, Revision 7, "Controlling WBS Processes," requires that all category I weld joints be uniquely identified on a Weld Map and that the welding be documented on a Weld Data Sheet.

Contrary to the above, on May 19, 1993, a gamma plug seal weld (welded prior to 1981) on Residual Heat Removal (RHR) pipe spool 74-RHR-21 was not uniquely identified on the Weld Map, and the welding was not documented on a Weld Data Sheet.

REASON FOR THE VIOLATION

The subject violation appears to have occurred as the result of personnel error in removing the weld identification from the weld map. As a result of TVA's review of welding related documentation records, TVA determined that the pipe spool (fabricated by Dravo) containing the 1-inch gamma plug was modified during field installation by Field Change Request M1573 in February 1979. This modification included removing a section of pipe from spool piece 74-RHR-21. This piece, which included the gamma plug weld 1-074A-D047-06P, was then cut to the required length and welded to an adjacent Tee. It appears the modification records for removing the section of pipe containing the gamma plug weld were misinterpreted, leading to the mistaken removal of the weld identification from the associated weld map. In accordance with site procedures at the time, this also resulted in removal of the corresponding weld operation sheets from the permanent record files.

CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND RESULTS ACHIEVED

A Weld Map Change Request has been completed to incorporate weld 1-074A-D047-06P (1-inch gamma plug seal weld) on Weld Map WBN-E2879-IC-47. A weld operation sheet for the subject weld has also been reconstructed based on the welder identification stenciled adjacent to the weld, installed material (using stenciled heat/serial numbers), visual inspection (repeated) and a liquid penetrant inspection (repeated). In addition, ferrite readings from the weld were taken to provide additional assurance that the proper weld filler material was used. The Ferrite readings confirmed that the weld material was within the range expected for EF308 weld filler material. The weld integrity was also verified during recent hydrostatic testing. TVA has initiated and closed Problem Evaluation Report (PER) WBP930141 to document the failure to identify weld 1-074A-D047-06P.

Several programs in the past have reviewed weld records and weld maps against the actual field configuration including:

During the Weld Evaluation Project (WEP), the Department of Energy (DOE), through its contractor EG&G, assessed the quality of TVA safety-related welds through a statistical sampling program. The welds were selected for inspection through a process which provided an equal chance for selection of each type of weld in a group, e.g., ASME piping welds. This population was then used to demonstrate 95 percent or greater confidence that at least 95 percent or more of the components meet the applicable code criteria. When specific safety-related welds were selected by weld identification number they were located by the use of the applicable weld map. No weld map discrepancies were identified during this review.

Independent of this NRC identified condition, the Additional Systematic Record Review (ASRR) performed a sampling program which included TVA safety-related large bore, small bore, and instrument lines welds. During this review 216 weld maps were field verified for configuration. One of the weld maps reviewed contained a deficiency similar to the condition described in this violation. TVA has initiated PER WBP930083 to resolve this deficiency.

In preparation of the NRC review of TVA radiographs (390/91-18) a 100 percent field walkdown of Class 1 welds (256) and a sample of Class 2 welds (584) was performed by Quality Control utilizing the construction weld maps to ensure traceability of the radiograph to the weld joint. There were no discrepancies identified during this walkdown.

Since the above reviews did not focus on gamma plug welds TVA randomly selected 12 gamma plugs in the field and verified their identification on the associated weld map. The weld identification was then verified in the Weld Monitoring Information System (WMIS). No deficiencies were noted.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATION

No further steps are considered necessary.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

TVA is currently in full compliance.

ENCLOSURE 2

WATTS BAR NUCLEAR PLANT UNIT 1 RESPONSE TO NRC'S JUNE 24, 1993 LETTER TO TVA NRC VIOLATION 390/93-38-03

DESCRIPTION OF VIOLATION 390/93-38-03

10 CFR Part 50, Appendix B, Criterion V, requires that, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings....."

Licensee Procedure SSP-3.01, Revision 6, "Quality Assurance Program," requires that the responsible organization shall perform work in accordance with approved work instructions and shall notify QC of imminent inspection points.

Contrary to the above, on May 26, 1993, activities affecting quality had not been accomplished in accordance with approved procedures and drawings, in that QC accepted safety-related pipe hanger 1063-1-63-388 was found with two base plate bolts missing and a third bolt unscrewed about half way out of the base plate. No approved work instructions for the partially disassembled hanger were available.

REASON FOR THE VIOLATION

On April 19, 1990 support 1063-1-63-388 was removed per maintenance request (MR) A-655359 to permit access to a kerotest check valve. Upon completion of the check valve rework, the disassembled support was reinstalled. During quality control (QC) inspection of the reassembled support, bolts were rejected due to the threads being visibly damaged. The bolts were subsequently replaced and QC called for reinspection, but the bolts were again rejected because of not meeting the bolt length requirements of the design drawing.

On September 19, 1990 a field design change notice (DCN) was written and approved to resolve the bolt length problem. At this time the MR program was put on a work stoppage and the MR engineer closed the MR based on Nuclear Construction completing the installation of this support with the DCN workplan program. This was coordinated between the MR engineer and the DCN workplan lead engineer.

On September 23, 1991, Workplan D-04642-02 was written to complete the installation of Support 1063-1-63-388, but it failed to include the requirements of installing/inspecting the bolts. While the workplan was being implemented, the field engineer (FE) noticed several bolts were missing/loose. The FE saw a temporary tag hanging from the support and made a statement in the workplan that "Additional work scope to be performed in WP D-04229-01." This matched the wording of the tag hanging on the support. The FE failed to backcheck to see if the scope of work in WP D-04229-01 would adequately satisfy the work to be completed on the support. If the FE checked WP D-04229-01, he would have found that this WP did not address this support and had been cancelled on March 31, 1992 (23 days before the statement was made on the work instruction sheet).

Consequently, it was personnel errors on the part of the workplan writers and the responsible field engineer that resulted in this missing/loose bolt condition. The workplan writer failed to implement an issued Field DCN into the workplan, and the field engineer failed to check tag information hanging on the support, to ensure that the remaining scope of work would adequately satisfy the necessary design requirements.

In the course of investigating this violation, one inconsistent piece of information was identified regarding the hanger bolts. A July 1, 1992 inspection of the hanger by a preservice inspection inspector identified the bolts to be in place. TVA is still investigating this inconsistency and its effect on cause determination discussed above. Should the resolution of this issue result in a change to the cause of this violation, a supplemental response will be submitted. This investigation is being documented under Finding Identification Report (FIR) WBFIR930120.

CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND RESULTS ACHIEVED

Modifications has completed the reinstallation, tightening, and documentation of the bolts for pipe support 1063-1-63-388.

Additionally, a memorandum has been issued to the field engineers explaining the effects of this finding, and instructing that if additional component work scope is to be completed by another work document, then it must be confirmed that the work to be completed is actually in the scope of that referenced work document.

This incident is considered to be an isolated occurrence, based upon the performance of a 10 percent review of closed field-work-required DCNs to assess the adequacy of DCN closure.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATION

No further actions beyond those discussed above are considered necessary at this time.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

All corrective actions required to address this concern have been completed.