



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

William J. Museler
Site Vice President
Watts Bar Nuclear Plant

FEB 08 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) - NRC INSPECTION REPORT NO. 390, 391/92-41 -
REPLY TO NOTICE OF VIOLATION

This letter responds to Inspection Report 390, 391/92-41 dated January 7, 1993, which identified a violation related to design control for field changes (390/92-41-01) and a violation related to procedural control of lifted conductors during component testing (390/92-41-02). TVA's response to these violations is provided as Enclosure 1 and Enclosure 2, respectively. TVA notes that corrective actions for these issues are addressed under WBN Incident Investigations II-W-92-21 and -22 which have been reviewed by the NRC staff.

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

Very truly yours,

William J. Museler

Enclosures
cc: See page 2

170046

9302170249 930208
PDR ADOCK 05000390
G PDR

JE01

U.S. Nuclear Regulatory Commission
Page 2

FEB 08 1985

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

Mr. B. A. Wilson, Project Chief
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNIT 1
REPLY TO NRC'S JANUARY 7, 1993 LETTER TO TVA
VIOLATION 390/92-41-01

DESCRIPTION OF VIOLATION

10 CFR 50 Appendix B Criterion III and the licensee's accepted Quality Assurance Program, TVA-NQA-PLN 89-A, Nuclear Quality Assurance Plan, Revision 2, Section 7.2.7.A, require that design changes including field changes shall be subject to design control measures commensurate with those applied to the original design. The licensee Quality Assurance Program endorses the requirements of ANSI N45.2.11-1974, Quality Assurance Requirements for the Design of Nuclear Power Plants. This standard, Section 8.0, requires that documented procedures shall be provided for design changes to approved design documents, including field changes. Additionally, these changes shall be justified and subjected to design control measures commensurate with those applied to the original design.

Contrary to the above, on March 26, 1992, Nuclear Engineering initiated a field change to the Auto Transfer Lockout Circuit for removal of a 52 auxiliary "a" contact from alternate power circuit breaker 1932 that was wired in parallel with lockout relay 86/932. The field change was documented as complete by use of Advance Authorization 15 to Field Design Change Notice 17784-A but the work was never accomplished. This resulted in failure to have the auxiliary "a" contact removed. This work-at-risk procedure exceeded the intent of changes which can be advanced authorized and does not impose design control measures commensurate with those applied to the original design.

REASON FOR VIOLATION

The incident resulted from inattention to detail on the part of the workplan writer and reviewer, and the QA reviewer. In addition, oversight by the design engineer and the verifier resulted in failure to reflect the deleted circuit in the original Design Change Notice (DCN) (DCN M-12051-C).

Field Design Change Notice (FDCN) 17784-A had been issued in March 1992 to address necessary "cleanup items" to the final design for System 211 (6.9KV Shutdown Power) as documented in DCN M-12051-C (March 16, 1992). This cleanup included the need to delete the subject auxiliary contact from all four 6.9KV SD Boards. Deletion of this contact from circuitry in 6.9 KV Shutdown Board 1A-A was to occur via Advance Authorization (AA) No. 15 (e.g., a supplement) to FDCN 17784-A. However, the AA-15 was documented as field complete on workplan D-12051-28 prior to the work being accomplished. This resulted in one of four 6.9KV SD Boards (Board 1A-A) not having the contact deleted until identified during testing. Work instructions to delete the contact were appropriately included in workplans developed by a different writer for the three other shutdown boards.

TVA identified this deficiency during implementation of preoperational testing on System 211. The analysis and corrective actions for this deficiency were addressed by TVA's Incident Investigation II-W-92-021 which has been reviewed by NRC.

In addition to the above findings, the investigation identified other areas for improvement in the use of the AA process.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The auxiliary contact circuit was deleted as required by WBN work order (WO) 92-11367-00.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS

Modifications management reviewed this incident with the involved workplan writer to emphasize the need for self-checking and attention to detail. Similar coaching sessions have been held with Quality Assurance reviewers and the design engineer and verifier responsible for DCN M-12051-C.

To evaluate the collective significance of the issues addressed by II-W-92-21 and other investigations, WBN conducted a comprehensive management assessment of WBN test program performance. This assessment, and its recommendations were discussed with NRC in a meeting of November 16, 1992, and reviewed in recent NRC inspections.

In addition, as discussed in the investigation report for II-W-92-21 (Revision 1), Engineering Administrative Instruction (EAI)-3.05, "Design Change Notices," was revised to restrict the use of advanced authorized FDCNs. These changes originally required that functional changes be reviewed/coordinated with the Startup and Test Department and were reflected in EAI-3.05, Revision 9. However, TVA has now decided to eliminate the use of AAs for changes to system logic, function, performance, or operation. These changes are reflected in EAI-3.05, Revision 11.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With respect to the identified discrepancies, TVA is currently in compliance.

ENCLOSURE 2

WATTS BAR NUCLEAR PLANT UNIT 1
REPLY TO NRC'S JANUARY 7, 1993 LETTER TO TVA
VIOLATION 390/92-41-02

DESCRIPTION OF VIOLATION

10 CFR 50 Appendix B Criterion V and the licensee's accepted Quality Assurance Program, TVA-NQA-PLN 89-A, Nuclear Quality Assurance Plan, Revision 2, Section 6.1.2A1 require 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 those instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Contrary to the above, procedures were inadequate, in that during May 1992, trouble shooting was performed under Generic Test Procedure GTE-XXX-02, Scheme Verification, to find an electrical ground in 6.9KV Shutdown Board 1A-A. The procedure did not ensure restoration of lifted leads. As result of this work, an electrical lead was left disconnected. Another lifted lead was discovered by testing but the cause could not be determined.

REASON FOR THE VIOLATION

TVA agrees that Startup Manual Procedures (SMPs) were inadequate regarding requirements for documentation of restoration of leads lifted in conjunction with component and preoperational testing activities. TVA's analysis of this event is documented by Incident Investigation II-W-92-022 which concluded that the control of lifted conductors and the reverification of landing of conductors was inadequate. In addition, the investigation found that trouble shooting for the ground on the 1A-A Shutdown Board was performed without approved work documents.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Wiring deficiencies identified by Incident Investigations II-W-92-021 and II-W-92-022 were corrected by work orders (WO) 921136700 and 921146200, respectively. In addition, WBN conducted a walkdown of scheme verification testing performed prior to implementing the lift/land and jumper log to evaluate any potential impact on completed tests. Systems reviewed included 211, 200 (161/6.9KV Preferred Offsite Power), 201 (6.9KV Unit Power), 202 (6.9KV Reactor Coolant Pump Power), and 244 (24KV Power). The results of the walkdowns found no further examples of lifted lead deficiencies.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS

The Startup and Test Department revised SMP-6.0, "Component Test Program," to require that lifted lead/land logs, jumper logs, and fuse logs be used for program generic test procedures, including second-party verification of relanding or removing wires. Additionally, Startup revised SMP 9.0, "Test Conduct," to define the approved scope of trouble shooting activities and the appropriate transition point to other work control processes.

To evaluate the collective significance of the issues addressed by II-W-92-22 and other investigations, WBN conducted a management assessment of WBN Test Program Performance. This assessment, and its recommendations were discussed with NRC in a meeting of November 16, 1992, and reviewed in recent NRC inspections.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With respect to the identified discrepancies, TVA is currently in compliance.