

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

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JUN 02 1988

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
	)	50-296

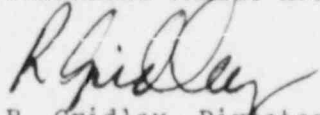
BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3 - NRC INSPECTION REPORT  
NOS. 50-259/88-02, 50-260/88-02, AND 50-296/88-02, - RESPONSE TO NOTICE OF  
VIOLATION

TVA responded to the subject notice of violation on April 28, 1988. At that  
time, TVA requested an extension until June 3, 1988, to investigate and  
develop responses to twelve (12) inspector concerns. This letter transmits  
our plans to the twelve (12) concerns. Enclosure 1 provides TVA's response.

If you have any questions, please telephone James E. Wallace at (205) 729-2053.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
R. Gridley, Director  
Nuclear Licensing and  
Regulatory Affairs

Enclosure  
cc: See page 2

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cc (Enclosure):

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ENCLOSURE 1  
RESPONSE  
NRC INSPECTION REPORT NOS.  
50-259/88-02, 50-260/88-02, 50-296/88-02  
LETTER FROM K. P. BARR TO S. A. WHITE  
DATED MARCH 24, 1988

1. NRC Concern

Multiple examples of craft and/or QC verifications of completed work and final inspections for modification activities subsequently found incomplete. Examples include loose conduit fittings and conduit tight covers, electrical panel construction debris, and incomplete painting of weld joints.

TVA Plan

Corrective actions to address this concern were stated in TVA's response to Notice of Violation B of this report and was provided on April 28, 1988. In that response, we explained how our present procedures require a final system walkdown and signature by the cognizant engineer to ensure the noted types of mistakes are found and promptly corrected prior to release of the system for service. Also, TVA committed to additional training for construction personnel. Additionally, TVA's procedures for identification and correction of conditions adverse to quality (CAQ) presently ensures prompt identification and correction of similar problems.

2. NRC Concern

Significant pipe support inspection requirements were omitted from work plans. Pipe support rework materially affected the physical integrity without provision for reinspection. Inadequate training and experience appeared to contribute to responsible personnel not recognizing the applicability of the inspection requirements.

TVA Plan

Corrective actions to address this concern were stated in TVA's response to Notice of Violation A of this report and was provided on April 28, 1988. In that response, we explained that a final system walkdown would be conducted by Browns Ferry Nuclear Plant (BFN) engineering under another procedure (PI 87-49), "Pipe Support Verification Program." TVA committed to provide additional training to the responsible engineer to more clearly depict in workplans any required inspections and associated walkdown projects.

3. NRC Concern

An RHR pipe support was installed with misalignment exceeding procedural limits. The condition was not recognized by field installation personnel and was not subject to final inspection.

TVA Plan

Corrective actions to address this concern were stated in TVA's response to Notice of Violation A of this report and was provided on April 28, 1988. In that response, we explained that a final system walkdown would be conducted by BFN engineering under another procedure (PI 87-49) "Pipe Support Verification Program." TVA committed to provide additional training to the responsible engineer to more clearly depict in the workplan any required inspections and associated walkdown projects.

4. NRC Concern

Design output documents failed to include necessary piping supports for HPCI valve test valves and tail pieces. Design and field personnel failed to recognize the omission and its potential for fatigue or seismic failure.

TVA Plan

The scope of ECN P0651 was to replace the HPCI valve only and permitted the test valves and tail pieces to be field routed. Present practices (General Design Criteria BFN-50-C-7103) do not allow field routing of piping. Additionally, the TVA small-bore piping program is evaluating the adequacy of previously installed field routed piping.

5. NRC Concern

The number and significance of EA findings to date (from relatively limited site EA surveillances and oversight activities) warrants an increase in the scrutiny available through the EA programs directed at the ECN and modification.

TVA Plan

TVA notes the NRC's assessment that an increase in scrutiny available through EA program is warranted. The Engineering Assurance Oversight Review Team is reviewing current design modifications to ensure the Transitional Change Control Program is effective and the changes are technically adequate. The Oversight Review Team reviewed ECNs which were completed after the design baseline walkdowns were completed and before the Transitional Change Control Program (i.e. procedure PI 86-03 implemented for ECN preparation) was initiated. The baseline program is reviewing the noted ECNs, therefore, no additional EA review of these ECNs is required since EA is continually monitoring the baseline program activities for adequacy and effectiveness.

6. NRC Concern

Post modification test control was found weak in several areas. Post modification testing administered by workplan did not provide for sufficient notification of the Shift Engineer, including one example wherein a test was delayed for three weeks without subsequent pretest notification. In a second example, a hydrostatic test was conducted prior to disposition and repair of weld (NDE) defects.

TVA Plan

TVA disagrees that Modification personnel did not notify Operations personnel while performing the hydrostatic test. This notification was documented on September 6, 1987 at 6:10 p.m. in the unit 2 reactor operator's log, and an assistant unit operator was assigned to assist the hydrostatic test.

TVA agrees that a hydro test was performed prematurely. Procedures have been revised to require that all nondestructive examinations be complete and signed off before any hydrostatic test begins.

7. NRC Concern

An unreviewed safety question determination (USQD) found that the design issued by ECN could result in system misoperation outside the bases of the safety analysis (spurious valve operation). The ECNs P0651 and P0652 have not been revised and the installation is mechanical field complete with no further action to date.

TVA Plan

The corrective action to resolve Significant Condition Report (SCR) BFN MEB 8502 is ECN P7037. ECN P7037 implements the removal of the air source from testable check valve FCV-73-45 by installation of a quick-disconnect type coupling. The closure process of ECN P7037 will assure that appropriate corrective action is complete, and spurious valve operation will not occur.

8. NRC Concern

The large number of modifications will necessitate a proportionately large number of procedure revisions. Specific procedure impacts are largely unidentified and detailed planning for specific procedure changes is not yet in place.

TVA Plan

Modification workplans have been reviewed for specific procedure revisions and the necessary changes are put into a modification data base. This data base is being used to ensure appropriate procedure changes are identified to the section responsible for affected procedures. It is estimated that only 10-20 percent of the modification workplans will affect procedure revisions. Modification field completions are occurring continuously and work plans are being processed at that time. This workplan closeout process includes identification to responsible organizations of needed procedure revisions.

9. NRC Concern

Piping and cable tray support design required numerous Field Change Requests indicating that more predesign and preconstruction attention to existing conditions should be exercised. This trend appeared to be improving during this inspection.

TVA Plan

Piping and cable tray support designs required numerous field change requests for frequent material substitution due to an absence of constructability walkdowns. Current TVA practices require a completed design package including intermediate design reviews and constructability walkdowns. These walkdowns have contributed to reduce the number of field changes.

10. NRC Concern

Weaknesses in administration of work packages including improper cross referencing (DCR and ECN to workplan, workplan to workplan, workplan to test, etc.) leading to potential misapplication of references; inappropriate work plan steps; failure to provide reference drawings for work steps; failure to include inspection, painting, etc., steps in workplans.

TVA Plan

General weaknesses which existed in workplan administration are being resolved by the several improvements in the workplan process. New procedures for workplan writing, handling, and control are now in place. Modification procedures (Site Director's Standard Practices: 8.1 "Plant Modification and design change approval", and 8.4 "Modification Workplans") have been revised and expanded. Modification and Addition Instructions (MAIs) have been expanded to provide better instructions for modification work. A computer aid program is being developed to assist responsible engineers to write a more uniform workplan package. In addition, extensive training on the upgraded procedures is being provided to modification personnel.

11. NRC Concern

Weakness in the completion of Nuclear Storeroom Requisitions for the proper entry of quality requirements with the potential for issuance of unqualified material.



TVA Plan

The inadequate nuclear storeroom requisitions were attributed to human error. Training of Modifications personnel in the proper completion of requisition forms is required for modification work. Modifications is scheduling all necessary personnel to attend an existing Division of Nuclear Training instruction course on the completion of the requisition forms.

12. NRC Concert

Nuclear Performance Plan, Volume III, Appendix D, lists ECNs required to be completed prior to unit 2, cycle 5 restart but does not currently list backlog ECNs required to be closed by Appendix A and Section II.2.

TVA Plan

All modifications, including ECNs for unit 2 startup, are currently being tracked by the Modification Planning and Scheduling section. TVA action plans are to ensure the closure of the modification planning and scheduling unit 2 cycle 5 backlog items.