



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37279

J. L. Wilson
Vice President, Sequoyah Nuclear Plant

September 11, 1992

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

Gentlemen:

In the Matter of) Docket Nos. 50-327
Tennessee Valley Authority) 50-328

SEQUOYAH NUCLEAR PLANT (SQN) - NRC INSPECTION REPORT NOS. 50-327,
328/92-22 - RESPONSE TO NOTICES OF VIOLATION (NOVs) 50-327,
328/92-22-01, -02

Enclosed is TVA's response to Bruce A. Wilson's letter to M. O. Medford dated August 12, 1992, which transmitted the subject NOVs. The first violation addressed management oversight of housekeeping and craft inattention to detail during the conduct of work activities around safety-related equipment. The second violation addressed a continuing problem with implementing configuration control, specifically implementation of the verification process. In addition to the response to the second violation, a request was made for TVA to address the untimely notification of the event. The notification and surrounding circumstances for the perceived untimely reporting are addressed as additional information following the second violation.

Enclosure 1 provides TVA's response to the NOVs. Commitments contained in this submittal are provided in Enclosure 2.

If you have any questions concerning this submittal, please telephone J. D. Smith at (615) 843-6672.

Sincerely,

J. L. Wilson
J. L. Wilson

Enclosures
cc: See page 2

9209250125 920911
PDR ADDCK 05000327
G PDR

230013

JE01

U.S. Nuclear Regulatory Commission
Page 2
September 11, 1992

Enclosures

cc (Enclosures):

Mr. D. E. LaBarge, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

NRC Resident Inspector
Sequoyah Nuclear Plant
2600 Igou Ferry Road
Soddy-Daisy, Tennessee 37379

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

Enclosure 1

RESPONSE TO NRC INSPECTION REPORT
NOS. 50-327/92-22 AND 50-328/92-22
BRUCE A. WILSON'S LETTER TO M. O. MEDFORD
DATED AUGUST 12, 1992

Violation 50-327, 328/92-22-01

"Technical Specification 6.8.1 requires that written procedures be established, implemented and maintained for applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Quality Assurance Program Requirements, Revision 2, February 1978. Appendix A to Regulatory Guide 1.33 requires that administrative procedures be established to ensure that maintenance that can affect the performance of safety-related equipment be properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

"(1) Site Standard Practice 12.7, HOUSEKEEPING/TEMPORARY EQUIPMENT CONTROL, Revision 7, Section 3.1.1.B, states, in part, that the foreman or work supervisor in charge of an activity shall ensure that proper cleanliness is maintained during and after completion of a work activity.

"(2) Maintenance Instruction (MI) 10.14, APPLICATION REPAIR OF PROTECTIVE COATINGS IN THE REACTORS AND AUXILIARY BUILDINGS, Revision 24, Section 3.6, states, in part, that equipment that may be damaged by coating work activities shall be protected by covering, enclosing, or removal from the work area to ensure that no equipment degradation occurs. Section 3.8, states, in part, that precautions shall be taken to ensure that coating of components with moving parts are not compromised for their intended design function due to binding, resulting from coating material i.e., [sic] mechanical linkage on the Diesel Generators.

"Contrary to the above, the previous procedures were not properly established or implemented as indicated in the following examples:

On or before July 24, 1992, modifications personnel failed to maintain adequate cleanliness control during floor stripping activities in the Turbine Driven Auxiliary Feedwater Pump room. This condition resulted in a failure of the pump to pass its required post-maintenance test and also resulted in a significant delay in returning the safety-related pump to operable status. On July 29, 1992, operability of the Unit 2 Turbine Driven Auxiliary Feedwater Pump was again compromised during room refurbishment (repainting) activities due to modifications personnel allowing epoxy coating to be applied to the mechanical linkages and other equipment necessary for normal operation of the pump governor valve.

"This is a Severity Level IV violation (Supplement 1)."

Reason For the Violation

On May 13, 1992, a work document was initiated for general refurbishment (repainting) of the auxiliary building, Elevation 669. Planning steps instructed craftsmen to obtain the required permits and make the required notifications before work start and/or restart. The craftsmen were to

prepare and paint all areas of walls, ceilings, steel surfaces, or equipment below the reference line, using appropriate paint as listed on TVA drawings and in accordance with the requirements of Maintenance Instruction (MI) 10.14, "Application Repair of Protective Coatings in the Reactors and Auxiliary Buildings." Prework briefings were held with all craftsmen on June 29, 1992, in which the precautions and limitations described in MI-10.14 and methods of preparation and coating application were discussed.

Coating preparation work on auxiliary building, Elevation 669, began on June 30, 1992, with repainting operations outside of the Unit 2 turbine-driven auxiliary feedwater pump (TDAFWP) room being accomplished before July 20, 1992. During this period, no specific work instructions (written or verbal) were given to the involved craftsmen concerning the possible migration of dust into the Unit 1 TDAFWP room. On July 20, 1992, the Modifications painters began surface preparations in the Unit 2 TDAFWP room by use of needle guns to remove the existing coating. The painters were given no specific work instructions (written or verbal) for precautions relative to dust control around equipment in the TDAFWP room. Craftsmen were verbally instructed to recoat all surfaces that had previously been coated. On July 29, 1992, a Modifications painter was repainting the Unit 2 TDAFWP equipment when he inadvertently applied paint (brush marks) to the shaft surface of the TDAFWP governor servo valve. The craftsman did not recognize the mistake.

The application of paint to moving parts is attributed to personnel carelessness, conflicting work instructions, and inadequate work document planning. Additionally, dust intrusion into TDAFWP components is attributed to weak oversight and direction, inadequate work document planning, and inadequate coordination and communication.

Corrective Steps That Have Been Taken and the Results Achieved

Management suspended the ongoing coating and preparation for coating operations on July 30, 1992, when it was identified that moving parts had been painted.

Walkdowns were performed by Modifications and Operations personnel to determine if paint was present on other safety-related equipment actuating surfaces. Also, the walkdowns focused on housekeeping associated with dust produced by the coating preparation activities. The walkdowns did not identify degradation of safety-related equipment. Minor discrepancies such as protective coating on nonmoving parts of snubbers, threaded valve stems, and stainless steel (piping and tanks) were identified and corrected as appropriate. A dedicated walkdown of electrical equipment was performed to evaluate dust intrusion. The walkdown did reveal dust intrusion; however, no operability concerns were identified. Work documents were initiated to clean affected electrical cabinets.

Degradation of constantly running equipment was evaluated by a review of bearing and winding temperatures of the component cooling pumps. These pumps were selected for review because of their operating mode and because coating preparation and painting had been performed in the area of the pumps. No equipment degradation was identified.

To determine if other safety-related equipment had been affected, work documents written on any equipment located on Elevation 669 that were initiated during the timeframe of the painting activities were evaluated. The condition and corrective action of the work documents were reviewed, and it was found that neither dust nor paint had caused additional equipment malfunctions.

Ventilation paths were reviewed to determine if dust carry-over through the ventilation system could provide a common mode condition for redundant safety-related equipment located on Elevation 669. The investigation determined that the safety-related pump rooms on Elevation 669 had individual supply from and returns to the auxiliary building general supply fans, and dust in the hall areas would not affect compartmentalized equipment. The exception was the TDAFWP room with normal air circulation taken from the general hall area of the auxiliary building. This made the TDAFWP rooms more susceptible to increased dust levels in the general area. The investigation concluded that dust generated by coating preparation did not present a common mode condition to redundant safety-related items.

Each painter craftsman was reindoctrinated to the procedural requirements concerning housekeeping and painting. Also, the applicable work document was replanned to add a checklist for performing a preliminary walkdown to coating preparation and application and daily housekeeping inspection requirements.

Corrective Steps That Will be Taken to Avoid Further Violations

MI-10.14 will be revised to include additional precautions to be taken during coating preparations.

Date When Full Compliance Will be Achieved

TVA is in full compliance.

Violation 50-327, 328/92-22-02

"Technical Specification 6.8.1 requires that written procedures be established, implemented and maintained for applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Quality Assurance Program Requirements, Revision 2, February 1978. Appendix A to Regulatory Guide 1.33 requires that administrative procedures be established to ensure that maintenance that can affect the performance of safety-related equipment be properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

"(1) Site Standard Practice (SSP) 12.6, INDEPENDENT VERIFICATION, Revision 1, specifies provisions for independent and second-party verification. Section 3.3.4 states, in part, that a second party verification and a functional test may be specified instead of an independent verification in work orders and approved plant procedures. This is provided that the testing does, in fact, verify each component under consideration.

"SSP-12.6, Section 3.1.5 further states, in part, that the preparers of site procedures/instructions shall ensure that applicable site procedures/instructions provide for independent verification/second party verification as appropriate.

"(2) Preventive Maintenance procedure PM 030272002 detailed actions for establishing correct configuration after work activities were performed on flow switch 2-FS-74-24.

"Contrary to the above, the preceding procedures were not properly established or implemented as indicated in the following example:

On or before July 1, 1992, the licensee failed to implement the requirements of SSP-12.6 and PM 030272002 resulting in improper termination of a lead to flow switch 2-FS-74-24. These actions resulted in a mislaid wire termination and potentially affected operability of the 2B-B residual heat removal pump.

"This is a Severity Level IV Violation (Supplement 1)."

Reason for the Violation

Inadequate self-checking and inattention to detail were the causes for the craftsmen to incorrectly terminate the field wire. There was only one wire removed and reterminated during the July 1, 1992, calibration preventive maintenance (PM) of the flow switch.

Second-party verification was not effectively implemented. The verifier did not identify that the field wire was terminated on the correct terminal. The terminal block was correctly labeled and the label corresponded to the procedure and drawing. The wire was misterminated on a terminal that was not labeled.

Another cause for this event was that the postmaintenance test (PMT) was ineffective. The work request (WR) did not clearly specify requirements necessary to verify that the miniflow valve functioned properly after the flow switch was replaced in conjunction with the PM. The PMT as stated in the WR was to properly calibrate and functionally check the flow switch. The ambiguity in the PMT led the craftsmen to believe that a system functional test or independent verification was not required.

Additional details concerning this event were reported in Licensee Event Report (LER) 50-328/92010 dated August 17, 1992.

Corrective Steps That Have Been Taken and the Results Achieved

The misplaced wire was correctly terminated and a functional test verified that the miniflow valve performed as designed. Wiring on the other miniflow switches for Units 1 and 2 was checked and verified as being correctly terminated.

Corrective Steps That Will be Taken to Avoid Further Violations

Maintenance craftsmen, planners, and procedure writers have been briefed on this event with an emphasis on the need for an adequate PMT or specifying an independent verification in lieu of a PMT.

The instrument PM data packages associated with the residual heat removal (RHR) miniflow valve switches have been revised to require independent verification for wire connections and also for jumpers.

Maintenance planners have been trained on the proper way to specify acceptance criteria for verifying that components can perform their intended functions.

Broader corrective actions associated with postmaintenance testing and verification are being pursued as the result of the safety injection pump breaker issue as described in LER 50-327/92014 and Inspection Report 50-327, 328/92-29.

Date When Full Compliance Will be Achieved

TVA is in full compliance.

Additional Information

On July 17, 1992, the shift operations supervisor (SOS) made the reportability call for this event based on the information available to him at the time. He determined that it was a 30-day report according to 10 CFR 50.73, a.2.i.B, and 10 CFR 50.73, a.2.ii, and verified this through concurrence with the Duty Plant Manager and the Site Licensing Manager. A review of Operations' logs was not done at this time to determine 10 CFR 50.72 reportability.

As new information was made available, the investigation team should have reevaluated reportability of the event under 10 CFR 50.72 criteria. However, the incident investigation process did not drive the investigation in this direction; and without the proper expertise, the team members did not readily recognize the liabilities associated with a train of RHR being out of service. This weakness in the incident investigation program has been corrected. The incident investigation program has been revised to provide a limited number of responsible event managers. These managers will be knowledgeable of reportability requirements. Also, the procedures governing regulatory reporting requirements and incident investigation, i.e., SSP-4.5 and SSP-12.9, are being enhanced to include additional reportability guidelines.

Enclosure 2

Commitments

Violation 50-327/92-22-01

The procedure governing application and repair of protective coatings will be revised by November 30, 1992, to include precautions to be taken during coating preparations.

Violation 50-327/92-22-02

There are none in addition to those already identified in LER 50-328/92010.