TVA

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MAY 28 1991

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, 328/91-06 - RESPONSE TO NOTICE OF VIOLATION 50-327, 328/91-06-01

Enclosure 1 contains TVA's response to B. A. Wilson's letter to D. A. Nauman dated April 25, 1991, which transmitted the subject notice of violation. Additional concerns noted in the transmittal letter are also addressed in the enclosed response. This event was previously reported in accordance with 10 CFR 50.73 by Licensee Event Report 50-328/91003. Enclosure 2 contains the commitment.

If you have any questions concerning this submittal, please telephone M. A. Cooper at (615) 843-8422.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

for

Mark O. Medford

Enclosure
cc: See page 2

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ENCLOSURE 1

RESPONSE TO NRC INSPECTION REPORT
NOS. 50-327/91-06 AND 50-328/91-06
B. A. WILSON'S LETTER TO D. A. NAUMAN
DATED APRIL 25, 1991

Violation 50-328/91-06-01

"Technical Specification 6.8.1 requires that procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, be established, implemented and maintained. This includes maintenance, operating, surveillance, administrative, and fuel handling procedures. The requirements of TS 6.8.1 are implemented in part by Administrative Instruction AI-37, Independent Verification, section 6.1.2 which states the breakers in the Emergency Core Cooling System shall be independently verified to be in the correct position/condition when the system or component is being returned to service or restored to a standby line-up.

Contrary to the above, on February 14, 1991, the breaker for the Unit 2, Number 3 cold leg accumulator isolation valve was manipulated during a non-routine evolution, without performance of any independent verification as required by AI-37, Independent Verification. This resulted in the breaker being left in the energized condition during plant operation contrary to the FSAR design basis.

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

Admission or Denial of the Alleged Violation

TVA admits the violation.

Reason for the Violation

The cause of the violation associated with independent verification is considered to be the decision to perform the activity as a limited evolution not requiring a procedure.

The direct cause of the breaker being left in the energized condition is attributed to inappropriate personnel action in placing the breaker in the locked-closed position rather than the locked-open position. The cause of that incorrect action could not be determined. Discussion with the involved assistant shift operations supervisor (ASOS) indicated his belief that the breaker was locked open. A contributor to the event is lack of independent verification. Independent verification of manipulations of emergency core cooling system (ECCS) components is required by Administrative Instruction (AI)-37, "Independent Verification"; however, personnel believed that independent verification was not required, given the process that was being used for this evolution.

AI-37 requires independent verification for the temporary alterations of, removing and returning ECCS systems from and to service. AI-30, "Nuclear Plant Conduct of Operation," provides information relative to "system configuration control of CSSC safety related systems" and controls for implementing limited evolutions without formal procedures. AI-30 also refers to AI-58, "Maintaining Cognizance of Operation Status - Configuration Status

Control," for a detailed description of maintaining the alignment of these systems in accordance with their appropriate valve and power availability checklists. AI-58 lists exceptions to configuration log entries for specific activities including limited evolutions. The subject evolution was implemented in this manner as a limited evolution that did not include the normal method of documenting independent verification and led the Operations personnel to believe that independent verification was not required for limited evaluations. Additionally, the shift operations supervisor (SOS) had a high level of confidence in the performance of the involved ASOS.

The root cause of this event, however, is considered to be the judgement made that this activity constituted a limited evolution not requiring a procedure and appropriate safety evaluation. While AI-30 provides flexibility for licensed personnel evaluation of the condition, TVA considers that this activity should clearly have been recognized as being outside the scope of the limited evolution process. Further, when the P-11 interlock was encountered during the evolution, this should have further indicated to the personnel involved that the activity was not a limited evolution and that a procedure was required. Had a procedure and associated safety evaluation been prepared, it is believed that required reviews would have properly identified and addressed the technical issues and the evolution likely would not have been allowed to occur. Additionally, if allowed, any evolution involving manipulation of ECCS components would have required written independent verification of return to normal.

A contributing factor to the incorrect judgement is considered to be an inadequate preevolution review. The review performed consisted of flow diagrams to assess the flow paths, technical specifications (TSs), and peer review among several senior reactor operators. However, it did not include the review of electrical, control, or logic prints, nor did it adequately assess TSs and Final Safety Analysis Report impact or significance. As a result of discussions concerning this evolution with Operations management and operating personnel, it is concluded that inadequate training had been provided to ensure appropriate and consistent implementation of limited evolutions.

Additional details concerning this event were provided in LER 50-328/91003 dated April 10, 1991.

Corrective Steps That Have Been Taken and Results Achieved

The following actions have been taken in response to the violation cited by the NRC staff.

Additional guidance has been incorporated into associated procedures governing conduct of limited evolutions. Bypassing of interlocks is specifically disallowed under limited evolutions. A training package was prepared and provided to licensed personnel.

The Plant Manager has emphasized with the Operations personnel who were involved with the breaker being left in the energized condition the importance of performing independent verification for activities affecting nuclear safety. The Operations Superintendent has conducted meetings with each of the Operations crews discussing the circumstances of this event and the importance of performing independent verification in accordance with AI-37. Additionally, as a result of the seriousness of this event, the Operations personnel involved have received the appropriate disciplinary action.

To provide interim controls until associated procedures were revised, a night order was issued by the Operations Superintendent to (1) require the Operations Superintendent's approval before performing a limited evolution (i.e., without a procedure) until further training is provided; (2) to require discussion with the Operations Superintendent if an unexpected response is encountered during a limited evolution; and (3) to clarify that the independent verification requirements of AI-37 apply to component manipulations regardless of the AI-58 method that is used to control the configuration. AI-58 was revised on May 16, 1991, to further clarify the need for independent verification.

As a result of this and another recent event (LER 50-327/91005) involving inadequate verification of wire terminations, TVA recognized the need to ensure verification requirements are clearly defined and understood and took additional action. A review of AI-37 was performed for clarity, consistency, and scope. The results of the review indicated that AI-37 was adequate. However, to ensure that site personnel understands verification, a site dispatch has been distributed to Sequoyah personnel emphasizing the intent and importance of self-verification and verification signatures. TVA considers that the corrective actions for both events have provided a heightened awareness relative to verification activities. Additional information related to corrective actions associated with this condition is contained in LER 50-327/91003.

Corrective Steps That Will Be Taken to Avoid Further Violations

In the longer term, plant procedures will be revised to disallow the use of limited evolutions involving safety-related systems with the exception of specifically delineated system operational manipulations, e.g., venting and flushing. The revisions to plant procedures will include provisions for handwritten instruction to handle activities and/or evolutions for safety related systems that do not warrant development of a new formal procedure. This process will require independent qualified review and a 10 CFR 50.59 review.

Date When Full Compliance Will Be Achieved

Sequoyah is in full compliance.

ENCLOSURE 2

COMMITMENT LIST

TVA will revise plant procedures to disallow the use of limited evolutions involving safety-related systems with the exception of specifically delineated system operational manipulations, e.g., venting and flushing. The revisions to plant procedures will include provisions for handwritten instruction to handle activities and/or evolutions for safety related systems that do not warrant development of a new formal procedure. This process will require independent qualified review and a 10 CFR 50.59 review. The revision to the plant procedures will be completed by August 15, 1991.