

Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379-2000

R.J. Adney
Site Vice President
Sequoyah Nuclear Plant

February 12, 1997

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

Gentlemen:

In the Matter of
Tennessee Valley Authority

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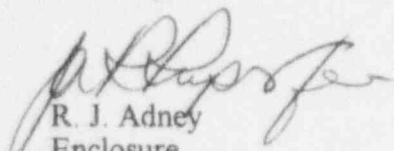
Docket Nos. 50-327
50-328

SEQUOYAH NUCLEAR PLANT (SQN) - NRC INSPECTION REPORT NOS. 50-327,
328/96-16 - REPLY TO NOTICE OF VIOLATION (NOV) 50-327, 328/96-16-06

Enclosed is TVA's reply to Charles A. Casto's letter to O. D. Kingsley, Jr., dated January 13, 1997. The violation notice was associated with the failure to adequately incorporate a requirement to periodically test the rod control system for potential new failure modes introduced as a result of a modification.

If you have questions regarding this response, please telephone R. H. Shell at (423) 843-7170.

Sincerely,


R. J. Adney
Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission
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cc (Enclosure):

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Region II
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ENCLOSURE
RESPONSE TO NRC NOTICE OF VIOLATION 50-327, 328/96-16-06
INSPECTION REPORT NOS. 50-327, 328/95-16
MARK S. LESSER'S LETTER TO OLIVER D. KINGSLEY, JR.
DATED JANUARY 13, 1997

VIOLATION 50-327, 328/96-09-06

"10 CFR 50, Appendix B, Criterion III requires that measures shall be established to ensure that design activities shall be prescribed and accomplished in accordance with procedures of a type sufficient to assure that applicable design inputs are correctly translated into specifications, drawings, procedures, or instructions. Applicable design inputs, such as design bases, regulatory requirements, codes and standards shall be identified, documented, and their selection reviewed and approved. The design input shall be specified on a timely basis and to a level of detail necessary to permit the design activity to be carried out in a correct manner and to provide a consistent basis for making design decisions, accomplishing design verification measures, and evaluating design changes.

"Contrary to the above plant modification DCN No. M11730A, Revision 0, was approved on November 30, 1995, for modifying Unit 1 Rod Control System without incorporating applicable design inputs concerning new failure modes introduced by the hardware modification described in Westinghouse Topical Report WCAP-13864, Section 3.5. This failure resulted in the plant modification package omitting requirements for development and implementation of new surveillance tests required to determine any component failure which is undetectable during normal operation.

"This is a severity level IV violation (Supplement 1)."

REASON FOR THE VIOLATION

The reason for the violation was that SQN failed to recognize the relationship between the WOG recommended periodic testing and the introduction of potential unwanted failure modes. TVA efforts to implement the rod control system modification initially focused on the design details and the post-modification testing for Unit 1. The need for additional long-term periodic tests based on the Westinghouse Owners Group (WOG) recommendations was recognized and planned for implementation after the Unit 1 modification. TVA was also working with Westinghouse to finalize the post-modification test plans. It was recognized that the post-modification test methods would form the basis for the long-term periodic test procedures. It was also anticipated that the test methods would likely be optimized as a result of lessons learned from the Unit 1 performance.

At the time the Unit 1 design change was being developed, the final NRC position on surveillance testing was not known. Instead, TVA was working with Westinghouse to understand their position on the conclusions regarding potential new failure modes.

Two barriers broke down that prevented SQN from recognizing the relationship between the WOG recommended periodic testing and the introduction of potential failure modes.

Incomplete coordination between SQN and Westinghouse in December 1994 and January 1995 resulted in TVA not recognizing that additional periodic testing was required. The communication between TVA and Westinghouse was inadequate. Westinghouse correspondence placed emphasis on the modification and acceptance testing, rather than periodic testing, to eliminate potential failure modes. Acceptance testing of the modification was concluded to be the post modification test following completion of the modification. TVA specifically questioned this point and Westinghouse reiterated their conclusions that the modification and its acceptance testing eliminated the potential failure modes. TVA failed to identify to Westinghouse that TVA's specific commitment to NRC regarding periodic testing, coil current test only, was different than the WOG recommendations.

A formal request was not sent to the responsible line organization to review the previous commitments based on the information provided by the NRC. TVA failed to recognize that NRC's request for reconsideration of TVA's commitments made before NRC's acceptance of the WOG recommendations was intended for TVA to review the revised WCAP to determine if additional commitments were required. The NRC letter stated that a new current order surveillance test (to be done each refueling outage) verifies that no failure exists in the rod control system current order circuits. The letter also stated that TVA committed to perform the WOG recommended rod control system logic modifications (current order timing adjustments) and to implement a new WOG recommended current order test to be performed during each refueling outage beginning with each unit's Cycle 6 refueling outage. Therefore, TVA concluded that the request by NRC to submit any changes to the previous commitments was to ensure that the commitments would be implemented as scheduled.

It should be noted that the safety evaluation performed by Westinghouse for TVA did address the potential failure modes and the post modification test included all of the required testing. Additionally, the need for a long-term periodic test was identified in the initial issue of the Unit 2 design change package (prior to the NRC inspection).

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN AND RESULTS ACHIEVED

The Unit 2 design package was revised to clarify information regarding the importance of periodic testing on eliminating potential failure modes. The Unit 1 design package was not revised since it was already implemented and closed.

A revised response to Generic Letter 93-04 was submitted to NRC to clarify the previous commitment and make a new commitment for periodic current order testing. This commitment is complete.

The supervisor responsible for review of the NRC request has been counseled and a training session in the Licensing department was conducted to address lessons learned and reinforce expectations on importance of formality in organizational assignments.

Lessons learned from the event including reinforcement of the importance of effective communications was presented to the involved Nuclear Engineering departments.

Westinghouse was notified of the identified condition and a letter was sent providing lessons learned and emphasizing the importance of effective communications.

CORRECTIVE ACTIONS THAT WILL BE TAKEN TO AVOID FUTURE VIOLATIONS

No further corrective actions are required.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With respect to the cited violation, TVA is in full compliance.