



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

March 17, 1994

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) - RESPONSE TO NRC QUESTIONS REGARDING TVA'S
REPLY TO NOTICE OF VIOLATION (NOV) 50-327, 328/93-42-01

This letter is in response to R. V. Crlenjak's letter to Mark O. Medford dated January 5, 1994, which transmitted the request for supplemental information on the subject violation. The violation involves the failure to follow procedures and is associated with maintenance activities on electrical equipment. Enclosure 1 provides TVA's response to the NRC questions. The additional commitment made as a result of this response is contained in Enclosure 2.

If you have any questions concerning this submittal, please telephone J. W. Proffitt at (615) 843-6651.

Sincerely,

Ken Powers
Site Vice President

Enclosures

cc: See page 2

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cc (Enclosures):

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ENCLOSURE

REVISED RESPONSE TO NRC INSPECTION REPORT
NOS. 50-327, 328/93-42
R. V. CRLENJAK'S LETTER TO MARK O. MEDFORD
DATED JANUARY 5, 1994

NRC Comment

"However, although the procedure did allow grounds, it clearly and specifically required the person installing the ground to hold the clearance. The response did not address the circumvention of this procedural requirement, which was the subject of the violation."

TVA Response

Site Standard Practice (SSP) 12.3, "Equipment Clearance Procedure," states that the person assuming the responsibility for placing and removing safety grounds SHALL be issued the clearance before placing the ground. This same person also assumes the responsibility for removing and returning ground discs before releasing the clearance."

In this case, the foreman providing the ground did not circumvent SSP-12.3 in assuming the responsibility for placing a ground. Normally, a foreman assumes the responsibility for placing the ground for the journeyman in his crew. The foreman obtains the clearance; the journeymen obtain the ground tags, place the grounds and ground discs, and then perform the work. In this case, the foreman assuming responsibility for the ground gave the ground to another foreman and journeyman to place, but the responsibility for the ground did not change.

NRC Comment

"The responses to Examples 1 and 2 of the violation need more detail with respect to cause and corrective actions. These violations are of particular concern because multiple supervisory personnel (foremen) were involved in circumventing procedural requirements, and in directing others to do so as well."

TVA Response

Sequoyah's initial response stated:

Acceptance of the existence of electrical safety hazards in day-to-day work practices, with insufficient effort to improve conditions where possible, has been a regular occurrence. The practice of working on or in the vicinity of energized equipment over the years has become routine, with insufficient considerations given to reducing potential hazards to the extent possible and/or providing compensating precautionary measures.

Training and repeated discussions with Electrical Maintenance personnel have resulted in the heightened awareness that it is not acceptable to circumvent procedures (safety or otherwise) in the interest of expediency. The revised rules for working on or near energized equipment have caused considerable discussion and increased awareness of a better standard of electrically-safe work practices.

Additional Information:

TVA's investigation determined that electrical safety work practices among Electrical Maintenance personnel in general had for some time been nonconservatively interpreted and applied; this included craft, engineers, and supervisors. These accepted practices significantly contributed to the specific events associated with this violation. For example, the cleaning of Compartment 1714 was performed without a hold order on the 250-volt (V) direct current (dc) control power; there was general acceptance of working around control power, i.e., just 250-V dc, such that a hold order was not considered necessary and was considered impractical with little consideration to improving the safety of working conditions. Another example included the cleaning of Breaker 1622, which was appropriately performed without a hold order since the cleaning was conducted with the breaker removed and sitting on the floor. These and other examples indicated that the overall culture relative to electrical safety fostered nonconservative and "loose" individual interpretations of requirements. In a number of cases, the application of electrical safety controls was being considered impractical, unnecessary, or not applicable in cases where controls should have been implemented. It was this overall mindset that resulted in the employment of work practices that circumvented established controls, i.e., the root cause. This was not determined to be a case of individuals intentionally violating known procedural requirements. TVA is aware that culture changes take time and effort and that incidents involving old practices may occur until the new culture becomes common practice. The corrective actions specified in the response, therefore, address the overall culture, attitudes, and interpretations associated with electrical safety standards and requirements.

NRC Comment

"Example 3 of the violation concerned the failure to remove multiple individuals from a clearance hold order while meggering was in progress. The response states, 'The reason for the violation is that the foreman holding the clearance did not verify that each individual had been removed from the hold order before testing began.' This statement contradicts procedure SSP-12.3, which specifies that Operations (the designated SRO), not the Maintenance foreman, is responsible for ensuring that other individuals are removed from the hold order prior to testing. As detailed in the inspection report, there was no record on the hold order form that Maintenance had notified Operations of the meggering activity as required. Therefore the response to this violation example does not address the failure of Maintenance to notify Operations that meggering was to be performed, so that Operations could remove other individuals from the hold order in accordance with procedures."

TVA Response

SSP-12.3 states that if testing is on a previously tagged piece of equipment, everyone on the clearance must be released from the clearance. The person performing the test will remain on the clearance. When testing is complete, the test director will inform the necessary personnel to get back on the original hold order. This statement implies that the test director (in this case, the foreman) is responsible for ensuring that other personnel on the clearance are removed. In this case, the foreman holding the clearance did not verify with Operations that each individual had been removed from the hold order before testing began. This was an example in which Electrical Maintenance personnel work practices led to inattention to detail in following the clearance procedure. The corrective action of continued monitoring and coaching of Electrical Maintenance employees and heightened awareness regarding electrical safety requirements are expected to improve Electrical Maintenance standards and adherence to procedures.

NRC Comment

"The response to Example 4 of the violation is inadequate, in that it only addresses the issue of hold order form entries which lacked some of the data for the logged work activities. The response does not address the much more important aspect of the violation, detailed in the inspection report, involving work activities which were performed but were not recorded on the hold order forms."

TVA Response

The violation was for hold orders being incompletely filled out with respect to work documents and work activities. The cause of this violation was a lack of sensitivity to procedural requirements and a lack of attention to details. It was determined that all work documents associated with a clearance were not being logged; however, there is no evidence to indicate that Operations was unaware of the activities being performed. The case where the meggering was performed without Operations' knowledge is an example where Operations was aware of maintenance activities being performed, but insufficient detail had been provided to ensure that Operations was aware when the testing was being performed. Additionally, it has been the practice of the Operations department not to log every work document that is being performed under a hold order as long as the general activities being performed are being logged. The clearance procedure is not clear as to whether the logging of each individual work document is required. The clearance procedure will be revised to clearly define the requirements for the logging of activities on a hold order.

NRC Comment

"Collectively, Examples 3 and 4 of the violation identify a number of examples where there was no record on the hold order sheet that Operations personnel were made aware of maintenance activities in progress. This lack of work control and in the interface between the Operations and Maintenance organizations is not addressed in the licensee's response."

TVA Response

The purpose of SSP-12.3 is to provide protection for personnel and plant equipment during operation, maintenance, and modification activities through the use of clearances. SSP-12.3 does not control the sign-on of activities to be performed in the field. SSP-7.53, "Work Approval and Closure," establishes the controls for the approval and closure of work activities.

As stated previously, the violation is associated with the failure to control meggering, which occurred without the knowledge of Operations personnel under the circumstances described above.

ENCLOSURE 2

INSPECTION REPORT 93-42

COMMITMENT

The clearance procedure will be revised to clearly define the requirements for the logging of activities on a hold order. This action will be completed by June 17, 1994.