TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

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SEP 11 1969

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

Gentlemen:

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In the Matter of Tennessee Valley Authority)

Docket Nos. 50-327 50-328

SEQUOYAH NUCLEAR PLANT (SQN) - NRC INSPECTION REPORT NOS. 50-327, 328/89-18 - REPLY TO NOTICE OF VIOLATION

Enclosed is TVA's response to B. A. Wilson's letter to O. D. Kingsley, Jr., dated August 10, 1989, which transmitted the subject notice of violation.

Enclosure 1 provides TVA's response to the notice of violation. Associated weaknesses as identified in the inspection report are addressed in Enclosure 2. Summary statements of commitments contained in this submittal are provided in Enclosure 3.

If you have any questions concerning this submittal, please telephone M. A. Cooper at (615) 843-6651.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

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M. O. Medford, Vice President and Nuclear Technical Director

Enclosures cc: See page 2

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

ENCLOSURE 1

RESPONSE TO NRC INSPECTION REPORT NOS. 50-327/89-18 AND 50-328/89-18 B. A. WILSON'S LETTER TO O. D. KINGSLEY, JR., DATED AUGUST 10, 1989

Violation 50-327, 328/89-18-03

"A. Technical Specification 3.6.5.2 states that the ice bed temperature monitoring system shall be OPERABLE with at least two operable RTD channels in the ice bed. TS 3.6.5.2, LCO Action statement a, states that with the ice bed temperature indication not available in the main control room, determine the ice bed temperature at the local ice condenser temperature monitoring panel every 12 hours.

Contrary to the above, from May 4, 1989 through June 29, 1989, Unit 2 operated at 100% power without an OPERABLE ice bed temperature monitor/ recorder in the main control room and the ice bed temperature at the local ice condenser temperature monitoring preel was not determined.

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

Admission or Denial of the Alleged Violation

TVA admits the violation.

Reason for the Violation

On May 4, 1989, it was discovered that the Unit 2 ice condenser bed temperature recorder in the main control room (MCR) was not printing. Limiting condition for operation (LCO) 3.6.5.2 was entered. Technical Specification (TS) 0.6.5.2, Action a, states that "with the ice bed temperature indication not available in the main control room, determine the ice bed temperature at the local ice condenser temperature monitoring panel every 12 hours." The ice condenser temperature monitoring panel is located inside containment. Surveillance Instruction (SI) 477, "Backup Ice Condenser Temperature Monitoring," is the instruction used to comply with the TS action statement. SI-477 contained an Appendix A and Appendix B to monitor ice bed temperatures in the event the MCR recorder was inoperable or to verify operability of the recorder. Ice bed temperatures could be monitored at the local monitoring panel in the incore instrument room inside containment using Appendix B. Appendix A had been written to permit monitoring of ice bed temperatures in the MCR by use of a temporary hookup to werify MCR recorder performance. Using SI-477, Appendix A, a temporary temperature recorder was placed in the MCR to monitor ice bed temperature while the permanent recorder was being repaired. Initial readings were taken showing acceptable ice bed temperatures (less than 27 degrees Fahrenheit [F]). The senior reactor operator (SRO) was notified of the acceptability of the temperature readings,

and LCO 3.6.5.2 was exited at 1645 with the temporary recorder still in service. The shift operations supervisor (SOS) reasoned that ice bed temperature indication was available in the MCR from an ice bed temperature monitoring system. Although the LCO had been exited, it was also reasoned that the intent of TS 3.6.5.2, Action a, was being met. The need to enter containment was not necessary, and thus, unnecessary personnel exposure would be eliminated.

The root cause of the violation was personnel misinterpretation of the TC and the temporary alteration process. TS 3.6.5.2 addresses a requirement for operability of the designed ice bed temperature monitoring systems and prescribes how it should be used for monitoring ice bed temperature. The ice bed temperatures were being monitored, but not by the permanently installed instrument designed for this task nor at the local ice bed monitoring panel in the incore instrument room. A temporary alteration to hook up the temporary recorder in the MCR could be performed under and controlled by the SI for the purpose of verifying ice bed temperature recorder performance. However, this hookup did not then constitute an operable designed ice bed temerature monitoring system. Exit from the LCO could only occur if the MCR temperature monitoring system was declared operable or if a new system was installed in accordance with the SQN design change process, i.e., a temporary alteration control form (TACF) or permanent design change process. SI-477 permitted the verification of the ice bed temperatures in the MCR with a temporary recorder. The surveillance requirement (SR) stated that the temperature should be determined at the local ice condenser temperature monitoring panel. The SI provided means to meet the intent of the action statement but did not provide for literal compliance. As a result of recent events involving timely evaluation of a questionable issue and interpretation of requirements, the site director has met with key site personnel to stress the importance of literal compliance and the escalation process to ensure timely resolution of guestionable situations.

Corrective Steps That Have Been Taken and Results Achieved

Upon determination of the above-described misinterpretations, immediate corrective action was taken by entering LCO 3.6.5.2 and verifying the ice bed temperatures at the local ice condenser temperature monitoring panel every 12 hours as required by TS 3.6.5.2, Action a. The personnent instrument was repaired and reinstalled, and LCO 3.6.5.2 was exited. Operations management has discussed the need for literal compliance with the TSs with the SOSs, and the plant manager has issued a memorandum to Operations personnel stressing the need for literal TS compliance.

SI-477 was revised to clearly and precisely reflect the literal requirements specified in the TS action statement.

Corrective Steps That Will Be Taken to Avoid Further Violations

No further corrective action is required.

Date When Full Compliance Will Be Achieved

TVA is in full compliance.

Violation 50-327, 328/89-18-10

"B. 10 CFR 50.59 states that the holder of a license authorizing operation of a production or utilization facility may make changes in the facility as described in the safety analysis report without prior Commission approval unless the proposed change involves an unreviewed safety question or a change in the technical specifications incorporated in the license.

SQA-119, Evaluation of Changes, Tests, or Experiments, implements the requirements of 10 CFR 50.59. Sequoyah administrative instruction AI-9, Control of Temporary Alterations, is the site approved process that implements performance of safety reviews for temporary changes. AI-9 provides requirements for installing, controlling, returning to normal, and documenting temporary alterations for safety related systems. AI-9 states that for temporary alterations that are installed on equipment that is out of service and normally excluded from the requirements of AI-9, if the instruction is complete or cannot be completed and the temporary alteration must remain installed, the temporary change shall be documented and controlled by AI-9.

Contrary to the above, Surveillance Instruction SI-477, Backup Ice Condensor [sic] Monitoring, was utilized by the licensee to perform a temporary alteration to the ice bed temperature monitoring system which remained installed without being controlled and documented as a temporary alteration in accordance with AI-9. This resulted in a failure to perform a determination of whether or not an unreviewed safety question existed pursuant to 10 CFR 50.59 as required by SQA-119.

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

Admission or Danial of the Alleged Violation

TVA admits the violation.

Reason for the Violation

As previously discussed, a misinterpretation of the temporary alteration process provisions of Administrative Instruction (AI) 9 led to TVA's use of SI-477 (rather than a TACF) for implementing what was considered to be a design change in allowing exit from the associated LCO. At that time, TVA believed equivalent and acceptable controls were being provided under SI-477 and were allowed by AI-9. A 50.59 review had been performed for SI-477. TVA has recognized misapplication of an SI in this situation, as discussed in response to Violation 89-18-03. Additionally, upon further review of SI-477, consideration of literal TS compliance, and review of the 50.59 performed on SI-477. TVA has determined that the 50.59 review performed for SI-477 had been deficient. The 50.59 review was deficient in that the procedure provided for meeting the intent of the LCO action statement, i.e., monitoring of temperatures in the MCR rather than at the local panel, but did not provide literal TS compliance. Additionally, the basis for equivalency of the electrical signals in the MCR and at the local panel was not documented in the 50.59 review.

Corrective Steps That Have Been Taken and Results Achieved

As previously described in Violation 89-18-03, LCO 3.6.5.2 was entered, and ice bed monitoring was performed at the local ice bed monitoring panel when TVA recognized the misinterpretation that had been made. The permanent instrument was repaired and reinstalled, and LCO 3.6.5.2 was exited. Operations management has discussed with the SOS the need for literal compliance with the TSs. The plant manager has issued a memorandum to Operations personnel stressing TS ownership and the need for literal compliance.

SI-477 was revised to clearly and precisely reflect the literal requirements specified in the TS action statement; an appropriate 50.59 review was performed for the revision.

Corrective Steps That Will Be Taken to Avoid Further Violations

No additional actions are considered necessary to ensure continued compliance with 10 CFR 50.59. NRC ask i that TVA determine whether corrective actions described to NRC in the enforcement conference held on June 29, 1989, would have prevented this violation. TVA believes that the more detailed safety assessment provided under TVA's enhanced 50.59 program, combined with heightened sensitivity to literal TS compliance, would have prevented SI-477 from being approved to allow monitoring of ice bed temperatures in the MCR. However, the misinterpretation made regarding the temporary alteration, i.e., allowing exit from the LCO, was not a 50.59 issue and, accordingly, would not have been affected by the recent 50.59 upgrades.

As an enhancement, SI-1, "Surveillance Program," will be revised by October 31, 1989, to clearly state that all SIs must comply with AI-9, Section 2.2.1, and to specify a maximum time that test equipment may be left installed (30 days) unless otherwise specified in the individual SI.

Date When Full Compliance Will Be Achieved

SQN is in full compliance.

Violation 50-327, 328/89-18-04

"C. 10 CFR 50 Appendix B, Criterion XVI states that measures shall be established to assure that conditions adverse to quality such as failures, malfunctions and defective equipment, and nonconformances are promptly identified and corrected.

Contrary to the above, during the period of June 25 to June 30, 1989, Sequoyah Plant management failed to take corrective action to resolve problems with control room ice bed temperature monitor operability and to ensure that a proper review was conducted pursuant to 10 CFR 50.59 for installation of a digital temperature indicator.

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

Admission or Denial of the Alleged Violation

TVA admits the violation. While TVA's recollection of exact dates and statements may differ slightly from those presented in the inspection report, these differences do not affect overall context of the violation or corrective action.

Reason for the Violation

As discussed in the response to Violation 89-18-03, there were different interpretations initially made in consideration of the TS and temporary alteration requirements. When the issue was initially raised by the NRC inspector with the SOS, the SOS acknowledged the viability of the inspector's position; however, he also acknowledged alternative interpretation that had been documented by the SOS on shift at the time of the LCO exit in early May. Recognizing the potential difference of interpretation and considering the legalistic versus technical nature of the issue (i.e., ice bed temperature was being adequately monitored to ensure bed temperatures remained below 27 degrees F), the SOS did not enter the LCO at that time but rather deferred the question to management for further discussion.

The issue was subsequently reviewed by various plant management individuals. Initially, the alteration appeared adequately controlled by SI-477, this type of alteration and control was allowed by AI-9, and a system was installed to provide ice bed temperature indication in the MCR. As a result of additional resident inspector questions, management continued to evaluate the cited concerns including the temporary alteration process, wording in SI-477, the 50.59 review performed to support SI-477, and literal TS compliance. A sense of urgency was not felt because of the lack of technical concerns.

By the end of the week under discussion, site management had concluded that, although no safety concerns existed, site processes had not been properly implemented. Appropriate actions were taken at that time as previously described.

Corrective Steps That Have Been Taken and Results Achieved

Site management has recognized the misinterpretation that was made regarding the TSs and temporary alterations to the plant. As a result of recent events involving timely evaluation of a questionable issue and interpretation of requirements, the site director has met with key site personnel to stress the importance of literal compliance and the escalation process to ensure timely resolution of questionable situations.

Site performance involving recent inspector concerns and questionable areas, such as soldering and source check of radiation monitors, indicates an aggressive and conservative management approach toward resolution of both technical and compliance-related issues.

Corrective Steps That Will Be Taken to Avoid Further Violations

No additional actions are required.

Date When Full Compliance Will Be Achieved

TVA is in full compliance.

TVA's response to NRC's request for the weaknesses and contributing factors presented in the inspection report to be addressed is as follows:

 "There is no indication on the IMI-134 configuration control sheet or the AI-47 chronological log of what trouble shooting or maintenance activities occurred other than the partial performance of SI-477."

The Work Reques' (WR) B265910 package addressed the subject activities and contains descriptions of the maintenance activities including references to troubleshooting that were associated with the ice bed temperature recorder problem. Instrument Maintenance Instruction (IMI) 134 configuration control sheets are attached to the WR package denoting configuration changes. TVA believes that the troubleshooting and maintenance activities are adequately recorded.

 "SI-477, contains inaccurate instructions in that it refers to a TS LCO action that does not exist (i.e., 3.6.5.2.c)."

SI-477, Revision 2, dated July 23, 1987, references a TS LCO, Action Statement 3.6.5.2.c. This TS (3.6.5.2) was revised (TS Change 87-19) deleting TS LCO Action Statement 3.6.5.2.b; thereby changing the preexisting third TS LCO Action Statement 3.6.5.2.c to 3.6.5.2.b. The original 3.6.5.2.c, previously referenced in SI-477, is actually 3.6.5.2.b in the new, revised TS LCO action statement. SI-477 has been revised to correct this reference error.

At the time of this TS change issuance, Operations personnel were notified to revise procedures as appropriate; however, Maintenance personnel were not. Since that time, SQN's process for implementing TS changes has been enhanced to better ensure all affected organizations are identified early in the process so that they receive appropriate notification of change issuances.

3. ". . . the licensee failed to follow SI-477 instructions when Appendix A was performed vice [sic] Appendix B. SI-477 requires Appendix B be performed when the Ice Bed Monitor system is inoperable."

SI-477 contained directions for accomplishing the ice bed temperature monitoring assignment when the primary indicator is inoperable. There were two locations to accomplish this task. One location was in the MCR, and the other location was at the local ice condenser temperature monitoring panel inside containment. Appendix A of SI-477 was for connecting to the back of the recorder in the MCR, Panel 10, and for monitoring the ice bed temperature from there. Appendix B of SI-477 was for connecting the temperature indicator at the seal table inside containment. SQN used Appendix A because the TS was misinterpreted to allow monitoring in the MCR using SI-477. 4. ". . the practice of using SIs, which are intended to support a temporary testing activity, to perform plant modifications was identified as a weakness in the licensee's temporary modification/alteration process implementation."

Using SIs to perform temporary plant modifications is not a general practice of SQN, nor wor 1 it be considered an acceptable practice. A misinterpretation of TS 3.6.5.2 and the intent of SI-477, as described in Enclosure 1, resulted in a temporary recorder being installed in the MCR as a substitute for the permanent recording instrument. This is considered an isolated case and is not representative of TVA's use of SIS.

5. "While using the digital Fluke monitor to take the place of the installed ice bed temperature monitor 2-TR-61-138, the data sheets for several performances of SI-2 indicated that temperature readings were taken from 2-TR-61-138, when in fact the temperature readings were taken from the digital Fluke monitor. Corrective action for the above violations should include resolution of the incorrect entries in these QA records.

After review of the appropriate electrical drawings, the inspector determined that the digital Fluke differed from the installed control room ice bed temperature monitor in that no alarm or annunciation function was provided by the digital Fluke, no permanent record was produced by the digital Fluke and the process of point selection was a manual process on the Fluke as compared to automatic circuit selection on the installed ice bed temperature monitor. The temporary monitor was electrically similar to the permanent monitor with the above exceptions."

TVA recognizes the temporary recorder did not provide an alarm or annunciator function in the MCR, but for all intent and purposes, it provided readings that were as correct as readings provided by the permanent recorder. The appropriate SI-2 data packages will be annotated to correctly indicate that recorded ice bed temperatures were obtained from the temporary recorder, not from permanent Recorder 2-TR-61-138.

ENCLOSURE 3

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Commitments

- 1. SI-1, "Surveillance Program," will be revised by October 31, 1989, to require that all SIs comply with AI-9, Section 2.2.1, and to specify a maximum time that test equipment may be left installed (30 days) unless otherwise specified in the individual SI.
- 2. The appropriate SI-2 data packages will be annotated to correctly indicate that recorded ice bed temperatures were obtained from the temporary recorder, not from permanent Recorder 2-TR-61-138. This will be accomplished by October 31, 1.89.