TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

January 20, 1984

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2 - NRC-OIE REGION II INSPECTION REPORT 50-327/83-26 AND 50-328/83-26 - RESPONSE TO VIOLATION

The subject OIE inspection report dated December 21, 1983 from R. C. Lewis to H. G. Parris cited TVA with two Severity Level IV Violations and one Severity Level V violation.

Enclosed is the response to the items of violation specified in the subject inspection report.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

To the best of my knowledge, I declare the statements contained herein are complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Licensing

Enclosure
cc (Enclosure):
Mr. Richard C. DeYoung, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

ENCLOSURE

RESPONSE - NRC INSPECTION REPORT NOS.
50-327/83-26 AND 50-328/83-26
R. C. LEWIS' LETTER TO H. G. PARRIS
DATED DECEMBER 21, 1983

Item A (327/83-26-01)

Technical Specification 2.2.1, Table 2.2-1, item 7 and Technical Specification 3.3.1.1 require that the reactor trip systems overtemperature delta T (OTΔT) instrumentation trip setpoint be less than or equal to the computed trip setpoint values. With a setpoint less conservative than a maximum of 2% in excess of computed setpoint, the channel is to be declared inoperable and the action statement of Technical Specification 3.3.1.1 applied. A minimum of three OTΔT channels is required to be operable. Contrary to the above, all four channels of OTΔT were degraded beyond the allowed 2% and thus were inoperable. An erroneous non-conservative data value existed in the program utilized in calibrating the error signal generating circuitry since Unit 1 cycle 2 restart in January 1983. Upon discovery on October 25, 1983, the licensee immediately complied with Technical Specification 3.0.3 and corrected the calibration error.

This is a Severity Level IV Violation (Supplement I). This violation applies to Unit 1 only.

1. Admission or Denial of the Alleged Violation

   TVA admits the violation occurred as stated.

2. Reasons for the Violation if Admitted

   On October 25, 1983, during recalibration of unit 2 reactor trip instrumentation for overtemperature delta T, it was noted that the calibration procedures contained incorrect values. An immediate review of unit 1 calibration data revealed that all four unit 1 overtemperature delta T channels were less conservative than technical specification allowable values.

   A technical specification change issued in January 1983 revised the values which define the delta I dead band boundaries and the rate at which the overtemperature delta T trip setpoints are reduced as delta I exceeds the dead band limits. These technical specification values are utilized in a computer program which calculates the instrumentation setpoints for the channels. When the new technical specification change was issued, personnel updated the computer program to include these new values. Investigation revealed that personnel had failed to correct two additional values in the program which were dependent upon the technical specification values. Subsequent review of the calibration data during the normal review cycle failed to discover the error.

3. Corrective Steps Which Have Been Taken and the Results Achieved

The computer program was corrected upon discovery and new setpoints calculated. Unit 1 complied with LCO 3.0.3 and the overtemperature delta T channels were all recalibrated by 1434 (CST) on October 25, 1983. The computer program has been revised to calculate the values that were inadvertently not changed rather than require personnel to hand calculate and change them, display the current technical specification values and request user verification, and print the technical specification values being used on the hard copy printout of the calibration data. The calibration procedure Technical Instruction (TI) 36, "Incore-Excore Calibration," has been revised to reference the technical specification for the values.

4. Corrective Steps Which Will be Taken To Avoid Further Violations

No further action is required.

5. Date When Full Compliance Will be Achieved

The plant was in full compliance on October 25, 1983.

Item B (327, 328/83-26-02)

Technical Specification 3.7.9 requires all safety-related snubbers be operable when in Modes 1 through 4. Tables 4.7.9.a and 4.7.9.b list the numbers of snubbers required by size for various systems. Technical Specification 3.0.4 requires that entry into an operational mode or other specified condition shall not be made unless the conditions for the Limiting Conditions for Operation (LCO) are met without reliance on provisions in the action requirements.

Contrary to the above, Unit 1 was in Mode 1 and Unit 2 in Mode 3 on October 7, 1983, with the Reactor Coolant System (RCS) having less than the Technical Specification specified number of snubbers on that system. The licensee had implemented an engineering change on the RCS by installing drain lines and valves on pressurizer safety valve loop seal piping and reconfiguring the seismic supports in accordance with the seismic analysis without having affected a Technical Specification change before ascending modes. The licensee conferred with NRC/NRR and regional management representatives and submitted an administrative change to the Technical Specification table as part of its immediate corrective actions.

This is a Severity Level V Violation (Supplement I). This violation applies to Unit 1 and Unit 2.

1. Admission or Denial of the Alleged Violation

   TVA admits the violation occurred as stated.

2. Reasons for the Violation if Admitted

   On October 7, 1983, the Field Quality Engineering Group was reviewing a Field Services Group workplan which included a change to Surveillance Instruction (SI) 162.1, and during this review, identified a potential discrepancy between the SI and the technical specification LCO table. This prompted a thorough investigation into safety-related snubbers by plant management. The investigation revealed two main items, these being (a) that the technical specification LCO table did not reflect the same number of snubbers by size and system when compared to SI-162.1, and (b) that neither the LCO table nor SI-162.1 reflected the actual count of safety-related snubbers in the plant. Factors contributing to (a) above are that there was approximately one year's difference between the preparation of the LCO table and SI-162.1 (revision 1), and that either, during this time, different drawings were used or an incorrect count was made from the drawings. It appears that the LCO table and SI did not agree from the date of issuance. Item (b) was most probably caused by the failure to use the latest as-constructed drawings during the preparation of the LCO table and the SI-162.1 listing. Contributing to these errors was a misunderstanding of the technical specifications such that it was interpreted that the SI and LCO table were for information and general guidance and that an update would be made as information became available.

3. Corrective Steps Which Have Been Taken and the Results Achieved

Upon discovery of the discrepancies, a complete review was initiated of safety-related snubbers at the plant. This review included a detailed comparison of the SI to the LCO table and a walkthrough of the latest as-constructed piping and hanger drawings to identify all snubbers. The tabulation made from the drawing review has been used to update the surveillance instruction, and all technical specification safety-related snubbers are now included in the SI. Persons involved in the misunderstanding of the technical specifications were instructed to use proper plant channels to obtain interpretations. Also, a technical specification revision was initiated and submitted to NRC/NRR for approval to resolve the discrepancy between the SI and the LCO.

A totally independent review of snubber drawings and comparison to the SI has been conducted because of the large numbers of drawings and snubbers involved. This independent review was completed on November 21, 1983, and the minor discrepancies found between the two reviews were resolved.

4. Corrective Steps Which Will Be Taken To Avoid Further Violations

Until approval by NRC/NRR of the technical specification change, there will not be any snubbers added or deleted from the newly corrected SI.

5. Date When Full Compliance Will Be Achieved

The plant was in full compliance on November 21, 1983.

Item C (328/83-26-01)

Technical Specification 3.3.3.7, Table 3.3-10, items 12, 13, and 14 requires that each pressurizer power operated relief valve (PORV), block valve and safety valve have two channels of position indication operable. Of these two channels per valve to provide adequate position indication, one channel for the PORVs and safety valves shall be the acoustic monitors. Technical Specification 3.0.4 requires that entry into an Operational Mode or other specified condition shall not be made unless the conditions for the LCO are met without reliance on provisions contained in the action requirements.

Contrary to the above, Unit 2 entered Mode 2 at 11:50 p.m. CST, on October 12, 1983, with all acoustic monitors inoperable in that the control room panel was removed to the shop for repairs. The conditions for LCO 3.3.3.7 were not met without reliance on provisions contained in the action requirements. The acoustic monitors were restored to service on October 13, 1983.

This is a Severity Level IV Violation (Supplement I). This violation applies to Unit 2 only.

1. Admission or Denial of the Alleged Violation

   TVA denies this violation.

2. Reasons for the Denial

   As stated in letters to NRC dated September 7, 1979, December 10, 1980, and February 16, 1982, in response to NUREG 0578 and 0737, Sequoyah has four separate means of determining safety valve position (i.e., open or closed).

   a. Temperature sensors downstream of each safety valve (one per valve). Temperature indication and alarm are provided in the main control room.

   b. Pressurizer relief tank has temperature, pressure, and level indication and alarm in the main control room.

   c. Acoustic flow monitors are mounted downstream of each safety valve (one per valve). A flow indicating module in the main control room is calibrated to detect failure of a valve to reclose. An alarm in the main control room will actuate when any valve is not fully closed.

   d. Pressurizer pressure indicator and alarm in the main control room.

In supplement 1 to the Sequoyah SER, NRC acknowledges these four means as providing indication of valve position. The bases for technical specification 3.3.3.7 (B 3/4 3.3.7) which provides the reasoning behind and the

"intent" of the specification states, ". . . the operability of the accident monitoring instrumentation ensures that sufficient information is available. . . to monitor and assess. . . an accident." Thus, the intent of requiring two indications per valve is to ensure "sufficient information is available" to assess whether a safety valve has failed to reclose.

TVA design provides four separate means of position indication for the pressurizer safety relief valves, and thus, we will take reasonable measures to ensure all four indications are operable during modes 1, 2, and 3. Only two indications, however, are required to meet the limiting condition for operation in the technical specifications, and the acoustic monitors are not specifically identified as being required operable. Sequoyah was, therefore, in compliance with LCO 3.3.3.7 at all times during the event described in the violation.