August 11, 2003

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) – UNITS 1 AND 2 – "RESPONSE TO NUCLEAR REGULATORY COMMISSION (NRC) GENERIC LETTER (GL) 2003-01: CONTROL ROOM HABITABILITY"

The Tennessee Valley Authority (TVA) is sending this letter in response to NRC's request in GL 2003-01, dated June 12, 2003. In this GL, NRC requested licensees to provide information regarding the design, maintenance, and testing of nuclear plant control room habitability systems and physical structures. This information is to be provided within 180 days of the GL 2003-01 issuance and would require licensees to respond no later than December 9, 2003. The GL also provides an allowance to respond within 60 days (August 11, 2003) if this schedule cannot be achieved. This letter is to inform NRC that TVA's final response for GL 2003-01 will not meet the 180-day criteria for SQN. Enclosure 1 provides the basis and necessity for exceeding the 180-day request. Enclosure 2 provides the commitment contained in this letter.

This letter is being sent in accordance with NRC RIS 2001-05. Please direct questions concerning this issue to me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,

Original signed by:

Pedro Salas
Licensing and Industry Affairs Manager

Enclosures
cc: See page 2

cc (Enclosures):
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ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY (TVA)
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

RESPONSE TO NUCLEAR REGULATORY COMMISSION (NRC)
GENERIC LETTER (GL) 2003-01: CONTROL ROOM HABITABILITY

TVA's SQN will not be able to respond to all aspects of GL 2003-01 within the requested 180-day period. TVA does plan to provide the requested response to the NRC in mid 2004 following unfiltered inleakage testing. This deviation from the NRC request is based on several reasons. The primary impact that necessitates the proposed GL response schedule is the upcoming fall refueling outage for SQN Unit 2 Cycle 12 in November of 2003. This outage involves several weeks of pre-outage activities prior to the actual outage start, as well as the consumption of nearly all site resources during the outage that is scheduled for approximately four weeks. The end of the outage is expected to be early December 2003. Accordingly, insufficient time is available to complete the actions requested by the 180-day date of December 9, 2003.

In addition to the above schedule impact, TVA foresees other impacts that support a schedule that results in a final response greater than the 180-day request. During both the outage activities and the holiday season, TVA will be performing activities to support the requested response including preparations for unfiltered inleakage testing. TVA has already started reviewing design documents, drawings, procedures, technical specifications, and other applicable documents and will continue to do so as resources permit throughout the proposed schedule. In addition, TVA will perform required maintenance activities to prepare for unfiltered inleakage testing of the control room envelope. Since both SQN and TVA's Watts Bar Nuclear Plant (WBN) will be performing this testing, TVA has scheduled vendors to support this effort on a back-to-back basis to optimize the testing effort. This testing is currently scheduled to begin in mid-February 2004 and conclude by mid-March 2004. TVA will submit the final response to GL 2003-01 within 90 days of the completion of unfiltered inleakage testing for SQN and WBN.

TVA believes that the proposed schedule for responding to the GL 2003-01 request is acceptable because of the high level of confidence that SQN has with regard to the acceptability of the control room emergency ventilation system design and operation.

This is based on several factors. One of the primary factors is that all components for the control room emergency air clean-up, air conditioning, and pressurization systems are located within the control room envelope. This configuration greatly reduces the potential for inleakage into the envelope.

During the SQN original pre-operational testing, an unfiltered inleakage test was conducted on the two pressurized air ducts that pass through the control room envelope from other areas. These tests were conducted in August of 1980 in response to test deficiencies associated with unfiltered inleakage to the control room. The battery room exhaust duct was measured at 7.7 cubic feet per minute (cfm) and the normal control building pressurization fan duct at 21.3 cfm. TVA also evaluated the contribution from pneumatic instrumentation and valve operators and from door ingress and egress to the envelope. This contribution was determined to be 19 cfm for pneumatic components and 3 cfm from door activities. These leakage amounts total 51 cfm and were used to determine acceptability. TVA revised calculations to include the 51 cfm total for the control room dose evaluations. The revised calculations indicated that 51 cfm was acceptable; therefore, TVA accepted the test results. Since 1980, SQN has made significant ducting modifications and has changed its amount of emergency pressurizing air from 200 cfm maximum to 1000 cfm maximum. Ductwork modifications included sealing ducts, removing ducting, and isolating ducts. TVA has also removed the functions of the normal control building pressurization fans such that the associated duct no longer has the potential to have a positive pressure with respect to the control room. This change alone removes 21.3 cfm of the original 51 cfm inleakage measurements. These plant modifications have the net effect of reducing the amount of unfiltered inleakage.

SQN performs surveillance testing of its control room and, as part of that testing, verifies that the control room habitability zone (which includes the control room) is at a positive pressure (minimum of 1/8-inch water gauge) to the outside and is at a positive pressure to spaces adjacent to the zone. Presently, there is only one positive pressure duct that passes through the zone from other areas (the battery room exhaust duct). The other heat, ventilation, and air conditioning systems serving the zone are contained within the zone or are at a negative pressure with respect to the zone. The leakage from this duct was measured at 7.7 cfm in 1980. The duct passing through the zone is approximately 12 feet in length, bolted flange-type construction; and all of the flange joints, bolts, and access panels are sealed with room temperature vulcanizing sealant. A recent walkdown of this ductwork verified the above described configuration for this duct, and the sealed areas were in excellent condition.

Therefore, the 7.7 cfm measured inleakage from this duct is still considered an acceptable value to use for inleakage considerations.

The fact that SQN verifies zone spaces are at a positive pressure to adjacent spaces, the normal control building pressurization fans have been abandoned, ductwork modifications were performed to reduce inleakage, and emergency pressurizing air flow has been increased, all support TVA's belief that a significant inleakage concern does not exist. The 51 cfm inleakage value is an assumption to the control room dose analysis that ensures the dose to the operators is less than 5 roentgen equivalent man in accordance with Title 10 of the Code of Federal Regulations, Appendix A, General Design Criteria 19, "Control Room." Based on the above discussions, TVA believes that the results of the unfiltered inleakage test will confirm acceptable inleakage rates for the control room envelope and confirm an acceptable system design and accident analysis. TVA's proposed schedule for responding to GL 2003-01 is appropriate for the reasons previously stated.

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY (TVA)
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

List of Regulatory Commitments

TVA will submit the final response to Generic Letter 2003-01 within 90 days of the completion of unfiltered inleakage testing for SQN and Watts Bar Nuclear Plant.