



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

September 21, 2000

TVA-SQN-TS-99-16

10 CFR 50.90

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 - TECHNICAL SPECIFICATION (TS) CHANGE NO. 99-16, SUPPLEMENTAL RESPONSE - UPGRADE OF SAFETY-RELATED CHARCOAL FILTER ADSORBER EFFICIENCY TESTING TO ASTM D3803-1989 STANDARD IN ACCORDANCE WITH REQUIREMENTS OF GENERIC LETTER (GL) 99-02**

- References:
1. TVA letter to NRC dated November 24, 1999, "Sequoyah Nuclear Plant (SQN), and Watts Bar Nuclear Plant (WBN), 180-Day Response to Generic Letter (GL) 99-02, 'Laboratory Testing of Nuclear-Grade Activated Charcoal,' Dated June 3, 1999"
  2. TVA letter to NRC dated November 24, 1999, "Sequoyah Nuclear Plant (SQN) - Units 1 and 2 - Technical Specification (TS) Change No. 99-16 - Upgrade of Safety-Related Charcoal Filter Adsorber Efficiency Testing to ASTM D3803-1989 Standard in Accordance with Requirements of Generic Letter (GL) 99-02"

The purpose of this letter is to provide information requested by NRC on the subject TS change and GL response. During a telephone conversation with NRC Staff and their contractors on July 28, 2000, TVA provided clarifying

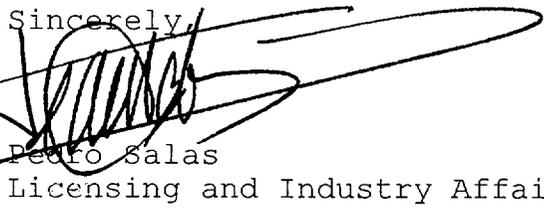
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information regarding the proposed TS change. Discussions included topics associated with the iodine removal capabilities, test penetration requirements, system flow rates across the charcoal filters, and humidity control for charcoal filter banks. At the conclusion of the telephone conversation, TVA agreed to provide specific docketed information associated with heater testing requirements for the emergency gas treatment system and the relative humidity considerations for the control room emergency ventilation system charcoal filters.

The enclosure contains TVA's restatement of the two questions from this telephone conversation and the requested responses. This information does not alter the original TS change request or the associated justifications and significant hazards consideration evaluations.

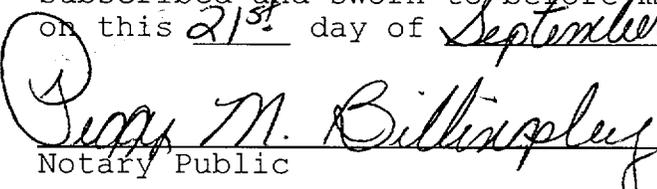
This supplemental response does not contain any new commitments. If you have any questions about this information, please telephone me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,



Pedro Salas  
Licensing and Industry Affairs Manager

Subscribed and sworn to before me  
on this 21<sup>st</sup> day of September



Peggy M. Billingsley  
Notary Public

My Commission Expires: October 9, 2002

Enclosure  
cc: See page 3

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**ENCLOSURE**

**RESPONSE TO NRC QUESTIONS REGARDING  
PROPOSED REVISION TO CHARCOAL FILTER TESTING**

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Two questions were requested to be addressed in a docketed response following the July 28, 2000, telephone conference between TVA and NRC staff and their contractors. These two questions along with the responses are listed below:

**Question 1:**

**The Technical Specifications do not require testing of the humidity control heaters for the Emergency Gas Treatment System (EGTS). How can it be assured that the relative humidity for EGTS charcoal will be maintained at 70% or less during accident conditions?**

**Response:**

A Technical Specification change for both Units 1 and 2 was approved by the NRC on March 6, 1989, (Amendment Nos. 103 and 92, respectively) to allow the removal of the required testing for the EGTS humidity control heaters. This was based on an analysis by TVA that during a loss of coolant accident or a high energy line break inside containment the relative humidity inside the annulus, where the EGTS suction is located, would be approximately 60%. This value is lower than the 70% limit that the duct heaters were installed to maintain.

**Question 2:**

**The Control Room Emergency Ventilation System (CREVS) does not have humidity control heaters. How can it be assured the relative humidity for CREVS charcoal is maintained at 70% or less during accident conditions?**

**Response:**

TVA's calculation SQN-31A-DO53-EPM-NQL-103088, "Find the Relative Humidity Ratio for the MCR Emergency Air Cleanup Units," analyzes the operation of the CREVs and the mixing of the outside air with the recirculated, air conditioned air from the main control room. This analysis concluded that the 3000 cubic feet per minute (CFM)

of air conditioned air mixed with 1000 CFM of outside air at the design basis summer conditions would result in a relative humidity of 49% air entering the charcoal bed. Therefore, testing the charcoal samples associated with the CREVs absorber section at 70% relative humidity is conservative.

In addition, it should be pointed out that, if outside air humidity is assumed to be greater than the design basis summer conditions and at the maximum level of 100% relative humidity, the resulting relative humidity at the charcoal filters is estimated to be 75.6%.