

October 20, 2006

Mr. Karl Singer
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT UNITS 1 & 2 - RESPONSE TO GENERIC LETTER 2003-01 "CONTROL ROOM HABITABILITY" (TAC NOS. MB9856 & MB9857)

Dear Mr. Singer:

On June 12, 2003, the U.S. Nuclear Regulator Commission (NRC) issued Generic Letter (GL) 2003-01, "Control Room Habitability," to holders of operating licenses for nuclear power reactors. The GL alerted addressees to findings at U.S. power reactor facilities suggesting that the control room licensing and design bases, and applicable regulatory requirements may not be met, and that existing technical specification surveillance requirements may not be adequate.

The GL requested confirmation that the licensee's control rooms meet the applicable regulatory requirements (e.g. General Design Criterion (GDC) 1, 3, 4, 5, & 19, draft GDC, or principle design criteria) and that the control room habitability systems are designed, constructed, configured, operated, and maintained in accordance with the facility's design and licensing bases. The GL further requested that responses include emphasis on: (1) confirmation of the most limiting unfiltered and/or filtered inleakage into the control room and comparison to values used in your design bases for meeting control room operator dose limits from accidents (Item 1a); (2) confirmation that the most limiting unfiltered inleakage is incorporated into your hazardous chemical assessments (Item 1b); (3) confirmation that reactor control capability is maintained in the control room or at the alternate shutdown location in the event of smoke (Item 1b); (4) confirmation that the technical specifications verify the integrity of the control room envelope (CRE), (Item 1c); and (5) information on any compensatory measures in use to demonstrate control room habitability, and plans to retire them (Item 2).

By letters dated August 11, 2003, and August 4, 2004, the Tennessee Valley Authority (TVA) provided its response to the GL for the Sequoyah Nuclear Plant (SQN), Units 1 and 2.

TVA performed testing of the SQN Main Control Room Habitability Zone during the week of May 3, 2004, using the methodology of American Society for Testing Materials standard E741, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution," for the SQN control room, which is common to both units. TVA determined that the maximum tested value for unfiltered inleakage into the CRE was 8 cubic feet per minute (cfm), which is less than the value of 51 cfm assumed in the design basis radiological dose analyses for control room habitability.

TVA provided information that adequately supported a conclusion that unfiltered inleakage into the CRE is not specifically incorporated into the hazardous chemical assessment. The staff has reached this conclusion because toxic gases are not considered to be a threat based on hazard screening performed on chemicals stored onsite or transported nearby, and that reactor control capability is maintained from either the control room or the alternate shutdown locations, in the event of smoke.

The GL further requested the licensee to assess the Technical Specifications (TS) to determine if they verify the integrity of the CRE including ongoing verification of the inleakage assumed in the design basis analysis for control room habitability in light of concerns regarding the use of a delta (Δ) P measurement to alone provide such verification. As permitted by the GL, TVA provided a schedule for revising the surveillance requirement in the TS to reference an acceptable surveillance methodology. By letter dated August 4, 2004, TVA proposed to submit a proposed revision to the current TS surveillance requirement based upon Technical Specification Task Force (TSTF)-448, "Control Room Habitability," within 9 months following NRC approval of TSTF-448.

The information you provided confirmed that there are no compensatory measures needed to be in place to demonstrate control room habitability. The information you provided also supported the conclusion that you are committed to meet the GDC regarding control room habitability.

TVA committed to submit a proposed revision to the current technical specification surveillance requirement for verifying control room enclosure in-leakage within 9 months of NRC's approval of TSTF-448. Based on this commitment and the information previously described, the staff considers the SQN response to GL 2003-01 to be acceptable.

Sincerely,

/RA/

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 & 50-328

cc w/enclosure: See next page

TVA provided information that adequately supported a conclusion that unfiltered inleakage into the CRE is not specifically incorporated into the hazardous chemical assessment. The staff has reached this conclusion because toxic gases are not considered to be a threat based on hazard screening performed on chemicals stored onsite or transported nearby, and that reactor control capability is maintained from either the control room or the alternate shutdown locations, in the event of smoke.

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/RA/

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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SEQUOYAH NUCLEAR PLANT

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