January 25, 2007

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

SUBJECT: BULLETIN 2004-01, "INSPECTIONS OF ALLOY 82/182/600 MATERIALS USED IN THE FABRICATION OF PRESSURIZER PENETRATIONS AND STEAM SPACE PIPING CONNECTIONS AT PRESSURIZED-WATER REACTORS," RESPONSE FOR SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 (TAC NOS. MC3512 AND MC3513)

Dear Mr. Singer:

On May 28, 2004, the U.S. Nuclear Regulatory Commission (NRC) issued Bulletin 2004-01, "Inspections of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors," to the industry. This bulletin informed addressees that current methods of inspecting the pressurizer penetrations and steam space piping connections fabricated from Alloy 82/182/600 materials may need to be supplemented with additional measures (e.g., bare-metal visual inspections) to detect pressurizer penetration and steam space piping connection flaws or leakage. The bulletin requested addressees to provide the NRC with information related to the materials of construction, the inspections that have been performed, and the inspections that will be performed to verify the integrity of the pressurizer penetrations and steam space piping connections.

By letter dated June 14, 2004, and by supplemental letters dated July 27, 2004, and February 11, 2005, the Tennessee Valley Authority (TVA) provided its responses to items 1a, 1b, 1c, and 1d of Bulletin 2004-01 for Sequoyah Nuclear Plant (SQN), Units 1 and 2. TVA's responses described its materials of fabrication and past, current and future inspection programs for pressurizer penetrations and steam space piping at SQN.

TVA's response to item 1a reported that some of the materials used in the fabrication of the pressurizer penetrations and steam space piping connections were Alloy 82/182/600 materials. This reply required TVA to provide further responses to the remaining items in the bulletin.

In response to item 1b, TVA described prior inspections and inspection results of pressurizer penetrations and steam space piping connections that had been performed at SQN. TVA's response included the basis for concluding that SQN satisfies the applicable regulatory requirements related to the integrity of pressurizer penetrations and steam space piping connections.

In response to item 1c, TVA provided a description of the Alloy 82/182/600 pressurizer penetration and steam space piping connection inspection program that will be implemented at SQN during the next and subsequent refueling outages. The description included the items to be inspected; the percent coverage that would be performed at each location; the inspection methods to be used; the qualification standards for the inspection methods and personnel; the process used to resolve any inspection indications; the inspection documentation to be generated; and the basis for concluding that SQN will satisfy the applicable regulatory requirements related to the structural and leakage integrity of pressurizer penetrations and steam space piping connections. If leaking pressurizer penetrations or steam space piping connections are found, TVA indicated that follow-up nondestructive examination (NDE) will be performed to characterize flaws in the leaking penetrations. TVA provided its plans for expansion of the scope of NDE to be performed if circumferential flaws are found in any portion of the leaking pressurizer penetrations or steam space piping connections.

In response to item 1d, TVA explained why the inspection program identified in the response to item 1c is adequate for the purpose of maintaining the integrity of the SQN reactor coolant pressure boundary and for meeting all applicable regulatory requirements that pertain to the SQN facility.

By letters dated January 13, 2005, for SQN Unit 1 and July 19, 2005, for SQN Unit 2, TVA provided responses to item 2a of Bulletin 2004-01. These letters provided a statement to the NRC indicating that the inspections described in the response to item 1c of the bulletin were completed during a recent SQN outage and a description of the as-found condition of the locations inspected was provided. TVA also described any findings of relevant indications of through-wall leakage and follow-up NDE performed to characterize flaws in leaking penetrations or steam space piping connections. A summary of all relevant indications found by NDE, a summary of the disposition of any findings of boric acid, and a description of any corrective actions taken and/or repairs made as a result of the indications found was also provided in these letters.

The NRC staff has completed its activities associated with the review of TVA's responses to Bulletin 2004-01 for SQN Units 1 and 2 and finds TVA's responses to be acceptable. It should be noted that industry commitments or staff regulatory actions may result in the need for TVA to modify its plans for the inspection and repair of items discussed in Bulletin 2004-01. It is the staff's expectation that TVA will revise its plans for the inspection and repair of items discussed in Bulletin 2004-01 consistent with other industry commitments or staff regulatory actions. This closes the staff's efforts with regard to the review of the Bulletin 2004-01 response for SQN. Please contact me at (301) 415-3974 if you have any questions on this issue.

Sincerely,

/RA/

Brendan T. Moroney, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

cc: See next page

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Brendan T. Moroney, Project Manager
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