Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

January 13, 2005

10 CFR 50.54(f)

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20005-0001

Gentlemen:

In the Matter of) Docket No. 50-327
Tennessee Valley Authority)

SEQUOYAH NUCLEAR PLANT (SQN) UNIT 1 INSPECTION RESULTS, NRC BULLETIN 2004-01, "INSPECTION OF ALLOY 82/182/600 MATERIALS USED IN THE FABRICATION OF PRESSURIZER PENETRATIONS AND STEAM SPACE PIPING CONNECTIONS AT PRESSURIZED-WATER REACTORS"

Reference: TVA Letter to NRC dated July 27, 2004, "Sequoyah Nuclear Plant (SQN) Units 1 and 2 and Watts Bar Nuclear Plant (WBN) Unit 1 - Sixty-Day Response to NRC Bulletin 2004-01, 'Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors' Dated May 28, 2004"

In accordance with Item 2(a) of the subject bulletin, TVA is providing the results of the inspections performed on SQN Unit 1 pressurizer penetrations. Requested information in Item 2(a) of the bulletin requires the following information be submitted to the NRC within 60 days after plant restart following the next inspection of the Alloy 82/182/600 pressurizer penetrations and steam space piping connections:

> "...a statement indicating that the inspections described in the licensee's response to item 1(c) of this bulletin were completed and a description of the as-found condition of the pressurizer shell, any findings of

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relevant indications of through-wall leakage, followup 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 any corrective actions taken and/or repairs made as a result of the indications found."

Pursuant to 10 CFR 50.54(f), the requested information is enclosed for SQN Unit 1 inspections that were performed during the Unit 1 Cycle 13 (U1C13) refueling outage. The inspections were performed using enhanced VT examination techniques to identify any leakage from areas having Alloy 82/182/600 material. No evidence of leakage was observed.

It should be noted that while removing insulation for performing the bulletin inspections, white residue was observed on a section of 6-inch vertical pipe connected to the top of the pressurizer relief nozzle. TVA performed volumetric examination of the pipe and conducted chemistry analysis of the residue. The residue was determined to be boron that had been deposited on the surface of the pipe through gaps in the insulation. The source of the boron was attributed to a prior valve leak that occurred in the general area. There was no flaw in the pipe or evidence of through-wall pipe leakage.

TVA's initial response to BL 2004-01 for SQN and WBN was previously provided by the reference letter.

If you have any questions regarding this response, please contact me at (423) 843-7170 or Jim Smith at (423) 843-6672.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 13th day of January, 2005.

Sincerely,

P. L. Pace
Manager, Site Licensing
and Industry Affairs Manager

Enclosure
cc: See page 3

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ENCLOSURE

Introduction

TVA conducted an inspection of the SQN Unit 1 pressurizer for NRC Bulletin (BL) 2004-01. A direct enhanced visual (VT) examination was performed on the pressurizer alloy 82/182/600 penetrations and steam space piping connections. The examinations were performed during the Unit 1 Cycle 13 refueling outage between October 28, 2004, and November 2, 2004, by TVA's Inspection Services organization (ISO).

Summary

The purpose of the enhanced VT examination was to identify any leakage from the pressurizer penetrations and steam space piping connections containing Alloy 82/182/600 material. The extent of the examinations was 100% of the pressurizer penetrations at the nozzle/safe ends and the adjacent pressurizer shell surface. The pressurizer penetrations examined were the spray nozzle, safety valve nozzles (three each), and relief valve nozzle located on the top of the pressurizer, and, although not required by BL 2004-01, the surge nozzle located at the bottom of the pressurizer. Mirror insulation was removed to afford access to the areas containing Alloy 82/182/600 material.

Procedure/Documentation

The direct enhanced VT examination process utilized personnel qualified to VT-2 methodology and able to resolve the 0.105" character height, in accordance with ASME Code, IWA-2210-1. TVA's procedure implements the recommendations specified in the EPRI Materials Reliability Program (MRP) 2003-039.

The enhanced VT examination was recorded using video, photographs, and resolution verification that are filed as life-of-plant documentation.

Results

The enhanced VT examination was performed at each specified location and 100% of the weld circumference and adjacent pressurizer shell surface was examined for evidence of boron leakage. No evidence of leakage was observed. Based on the acceptable as-found condition of the penetrations and adjacent pressurizer shell surfaces, there was no followup NDE, disposition of findings, or corrective actions required. The inspection results were documented in SQN's Section XI Augmented Examination Program.