



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 17, 2008

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

SUBJECT: REVIEW OF SEQUOYAH NUCLEAR PLANT, UNIT 1, STEAM GENERATOR
TUBE INSPECTION REPORTS FOR THE FALL 2007 (U1C15) OUTAGE
(TAC No. MD8755)

Dear Mr. Campbell:

By letters dated April 23 and August 15, 2008, Tennessee Valley Authority (the licensee) submitted information summarizing the results of the 2007 steam generator tube inspections at Sequoyah Nuclear Plant, Unit 1. These inspections were performed during the fifteenth refueling outage (U1C15).

The staff of the U.S. Nuclear Regulatory Commission (NRC) has completed its review of these reports and concludes that the licensee provided the information required by their technical specifications and that no additional follow-up is required at this time. The NRC staff's review of the reports is enclosed.

Sincerely,

A handwritten signature in black ink that reads "Brendan S. Moroney".

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

Docket No. 50-327

Enclosure: As stated

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SUMMARY OF STAFF'S REVIEW

SEQUOYAH NUCLEAR PLANT, UNIT 1

2007 STEAM GENERATOR TUBE INSPECTIONS

TAC NO. MD8755

DOCKET NO. 50-327

By letters dated April 23 and August 15, 2008, Tennessee Valley Authority (the licensee) submitted information summarizing the results of the 2007 steam generator (SG) tube inspections at Sequoyah Nuclear Plant (Sequoyah), Unit 1. These inspections were performed during the fifteenth refueling outage (U1C15).

Sequoyah Unit 1 has four SGs designated Model 57AG. These SGs each contain 4,983 thermally treated Alloy 690 tubes. These SGs were installed in 2003. The tubes have an outside diameter of 0.75 inches and a wall thickness of 0.043 inches. The tubes were hydraulically expanded into the tubesheet and are supported by several type 409 stainless steel, lattice grid tube supports. The U-bend portion of the tubes is supported by diagonal and vertical straps.

The licensee provided the scope, extent, methods, and results of the Sequoyah Unit 1 SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions (i.e., tube plugging) taken in response to the inspection findings. At the time of the inspection, the SGs had operated for approximately 48.6 effective full power months.

As a result of the review of the reports, the U.S. Nuclear Regulatory Commission (NRC) staff has the following comments/observations:

1. A group of smears held together by a staple may have been left in SG 4 by a radiological protection technician. The smears were not found during a visual inspection; however, the licensee evaluated the consequences of leaving the smears and staple in the SG and determined the condition to be acceptable.
2. New bobbin coil signals were detected at the U-bend supports. Since the signals were in areas where wear from interaction of the tube with the support had been identified in the previous inspection (based on rotating probe examinations), rotating probe examinations of these new signals was not considered necessary. The NRC staff notes that the bobbin coil does not provide enough information to ascertain the nature (e.g., volumetric) and location (e.g., aligned with the support) of the bobbin coil signals. As a result, other causes of the indication (e.g., tube-to-tube wear) cannot be ruled out based solely on the bobbin coil data. However, the NRC staff notes that the most likely cause (based on operating experience) is wear with the tube support.

Enclosure

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by the technical specifications. In addition, the NRC staff concludes that there are no technical issues that warrant follow-up action at this time since the inspections appear to be consistent with the objective of detecting potential tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

Principal Contributor: Aloysius O. Obodoako

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/RA/

Brendan Moroney, Project Manager
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