

May 1, 2006

Mr. Karl W. Singer
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
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SUBJECT: SEQUOYAH NUCLEAR PLANT, UNIT 2 — SUMMARY OF THE STAFF'S
REVIEW OF THE STEAM GENERATOR TUBE INSPECTION 15-DAY AND
90-DAY REPORTS FOR END-OF-CYCLE 13 REFUELING OUTAGE IN 2005
(TAC NO. MC8118)

Dear Mr. Singer:

By letter dated May 31, 2005, (Agencywide Documents Access and Management System Accession Number, ML051600187), Tennessee Valley Authority (TVA, the licensee) submitted the 15-day steam generator (SG) tube plugging report in accordance with Technical Specification (TS) 4.4.5.5.a. By letter dated August 15, 2005 (ML052340503), TVA submitted the 90-day SG voltage-based alternate repair criteria and W* report in accordance with Sequoyah Nuclear Plant (SQN), Unit 2, License Condition 2.C.(8)(b). By letter dated February 22, 2006 (ML060540467), the licensee provided additional information concerning these reports. In addition to these reports, the Nuclear Regulatory Commission (NRC) staff summarized additional information concerning the 2005 SG tube inspection in a letter dated June 7, 2005 (ML051810694).

The NRC staff has completed its review of these reports and concludes that the licensee provided the information required by SQN, Unit 2 TSs, and that no additional followup is required at this time. The staff's review of the reports is enclosed.

Sincerely,

/RA/

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

Docket No. 50-328

Enclosure: Staff's Review

cc w/encl: See next page

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Mr. Karl W. Singer
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SEQUOYAH NUCLEAR PLANT

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SUMMARY OF THE STAFF'S REVIEW OF
SEQUOYAH NUCLEAR PLANT, UNIT 2 — STEAM GENERATOR TUBE INSPECTION
15-DAY AND 90-DAY REPORTS FOR THE END-OF CYCLE 13 REFUELING OUTAGE
DOCKET NO. 50-328

By letter dated May 31, 2005, (Agencywide Documents Access and Management System Accession Number, ML051600187), Tennessee Valley Authority (TVA, the licensee) submitted the 15-day steam generator (SG) tube plugging report in accordance with Technical Specification 4.4.5.5.a. By letter dated August 15, 2005 (ML052340503), TVA submitted the 90-day SG voltage-based alternate repair criteria and W* report in accordance with Sequoyah Nuclear Plant (SQN), Unit 2, License Condition 2.C.(8)(b). By letter dated February 22, 2006 (ML060540467), the licensee provided additional information concerning these reports. In addition to these reports, the Nuclear Regulatory Commission (NRC) staff summarized additional information concerning the 2005 SG tube inspection in a letter dated June 7, 2005 (ML051810694).

SQN, Unit 2 has Westinghouse Model 51 SGs, which are designated SG1, SG2, SG3, and SG4. All four SGs were inspected during the May 2005 refueling outage. The Westinghouse Model 51 SG consists of approximately 3300 tubes, which have an outside diameter of 7/8-inch and a wall thickness of 0.050-inch. The tubes were explosively expanded into the tubesheet and are supported by several 3/4-inch carbon steel tube support plates, which contain drilled holes through which the tubes pass.

The licensee implements alternate tube repair criteria for degradation within the tubesheet region (W*) and for outside diameter stress corrosion cracking at the tube support plate elevations.

The licensee provided the scope, extent, methods, and results of their SG tube inspections for implementation of these alternate tube repair criteria in the documents referenced above. The licensee also described corrective actions (e.g., tube plugging) taken in response to the inspection findings.

As a result of the review of the reports, the NRC staff has the following comment/observation:

The licensee indicated that indications of outside diameter stress corrosion cracking that were detected at the tube support plate elevations at the end-of-cycle 13, which did not have a corresponding end-of-cycle 12 indication, were not included in the growth rate determination. This practice is permitted as discussed in Section 2.b.2(2) of Attachment 1 to Generic Letter 95-05 provided the indication does not change from nondetectable to a relatively high voltage (e.g., 2.0 volts). For the end-of-cycle 13

inspections at SQN, Unit 2 there were no such indications (i.e., those that went from non-detectable to a relatively high voltage).

Based on a review of the information provided (i.e., regarding implementation of the alternate tube repair criteria), the NRC staff concludes that the licensee provided the information required by their technical specifications. In addition, the NRC staff concludes that there are no technical issues that warrant followup 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: K. Karwoski

Date: May 1, 2006