



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

January 16, 2019

Mr. Joseph W. Shea  
Vice President, Nuclear Regulatory  
Affairs and Support Services  
Tennessee Valley Authority  
1101 Market Street, LP 4A  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – REVIEW OF THE FALL 2017  
STEAM GENERATOR TUBE INSPECTION REPORT (EPID L-2018-LRO-0010)

Dear Mr. Shea:

By letters dated February 16, 2018, and June 4, 2018 (Agencywide Documents Access and Management System Accession Nos. ML18047A370 and ML18155A487, respectively), Tennessee Valley Authority (the licensee) submitted information to the U.S. Nuclear Regulatory Commission (NRC) summarizing the results of the fall 2017 steam generator tube inspections performed during the first refueling outage at the Watts Bar Nuclear Plant, Unit 2. The report was submitted in accordance with the requirements of Technical Specification 5.7.2.12, "Steam Generator (SG) Program."

The NRC staff has completed its review of the information provided and concludes that the licensee provided the information required by the technical specifications. No followup is required at this time. A summary of the staff's review is enclosed.

If you have any questions, please contact me at 301-415-6020 or [Robert.Schaaf@nrc.gov](mailto:Robert.Schaaf@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Robert G. Schaaf".

Robert G. Schaaf, Senior Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosure:  
Review of the Fall 2017 Steam Generator  
Tube Inspection Report

cc: Listserv

STAFF REVIEW OF  
FALL 2017 STEAM GENERATOR TUBE INSPECTION REPORT  
TENNESSEE VALLEY AUTHORITY  
WATTS BAR NUCLEAR PLANT, UNIT 2  
DOCKET NO. 50-391

By letters dated February 16, 2018, and June 4, 2018 (Agencywide Documents Access and Management System Accession Nos. ML18047A370 and ML18155A487, respectively), Tennessee Valley Authority (the licensee) submitted the results of the steam generator (SG) inspections performed at Watts Bar Nuclear Plant, Unit 2. These inspections were performed during the first refueling outage (RFO 1).

The four Model D3 SGs at Watts Bar Nuclear Plant, Unit 2, were designed by Westinghouse. Each SG contains 4,674 mill-annealed tubes with a nominal outside diameter of 0.75 inches and a nominal wall thickness of 0.043 inches. The SGs have an integral preheater with flow distribution baffles. The tubes are supported by carbon steel drilled tube support plates.

The licensee provided the scope, extent, methods, and results of its SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions (e.g., tube plugging) taken in response to the inspection findings.

Based on its review of the report submitted, the staff has the following observations and comments:

- No indications of stress corrosion cracking were noted during the inspection.
- The licensee submitted a revised inspection report in response to the request for additional information from the U.S. Nuclear Regulatory Commission staff. The revised report outlined how the licensee used signal injection technology to address a permeability variation found in the tube in row 24, column 97 (R24C97), in SG 3, described the likely cause of an anomaly in tube support plate H01, and corrected two numerical errors (one each in Table 2-2 and Table 2-4).

Based on a review of the information provided, the staff concludes that the licensee provided the information required by its technical specifications. In addition, the staff concludes there are no technical issues that warrant additional 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.

Enclosure

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – REVIEW OF THE FALL 2017  
STEAM GENERATOR TUBE INSPECTION REPORT (EPID L-2018-LRO-0010)  
DATED JANUARY 16, 2019

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AJohnson, NRR

**ADAMS Accession No.: ML19003A569**

\*by memorandum

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