



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

November 22, 2017

Mr. Daniel G. Stoddard  
Senior Vice President and Chief Nuclear Officer  
Dominion Nuclear  
Virginia Electric and Power Company  
Innsbrook Technical Center  
5000 Dominion Blvd.  
Glen Allen, VA 23060-6711

SUBJECT: SURRY POWER STATION, UNIT 1 - REVIEW OF THE FALL 2016 STEAM  
GENERATOR TUBE INSPECTION REPORT (CAC NO. MF9683;  
EPID L-2017-LRO-0009)

Dear Mr. Stoddard:

By letter dated April 24, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17121A378), Virginia Electric and Power Company (the licensee) submitted steam generator tube inspection results from the fall 2016 inspections at Surry Power Station, Unit 1, during refueling outage 27.

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

Sincerely,

A handwritten signature in black ink that reads "Karen Cotton Gross".

Karen Cotton Gross, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-280

Enclosure:  
Review of Inspection Report

cc: Listserv

REVIEW OF THE FALL 2016 STEAM GENERATOR TUBE INSPECTION REPORT

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION, UNIT 1

DOCKET NO. 50-280

By letter dated April 24, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17121A378), Virginia Electric and Power Company (the licensee) submitted steam generator (SG) tube inspection results from the fall 2016 inspections at Surry Power Station (Surry), Unit 1 during refueling outage 27.

In 1981, Surry, Unit 1, installed three Westinghouse Model 51F replacement SGs. Each SG contains 3,342 thermally treated Alloy 600 tubes with a nominal outside diameter of 0.875 inches and a nominal wall thickness of 0.050 inches. The tubes were hydraulically expanded at both ends for the full depth of the tubesheet. The tubes are supported by stainless steel tube support plates (TSPs) with quatrefoil-shaped holes. The U-bends of the tubes installed in rows 1 through 8 were thermally stress relieved after bending.

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

After review of the information provided by the licensee, the U.S. Nuclear Regulatory Commission (NRC) staff has the following comments/observations:

- At the time of the inspections, the SGs had operated for 334 effective full-power months since the first inservice inspection after installation.
- In SG B, the tube in row 3 column 20 has a historical restriction above the seventh TSP on the cold-leg side of the SG, so this tube was inspected with a magnetic rotating pancake coil probe instead of a bobbin probe.

Based on a review of the information provided by the licensee, the NRC staff concludes that the licensee provided the information required by its technical specifications. The SG tube inspections at Surry, Unit 1, 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:  
Andrew Johnson, NRR/DMLR/MCCB

Enclosure

SUBJECT:     SURREY POWER STATION, UNIT 1 - REVIEW OF THE FALL 2016 STEAM  
              GENERATOR TUBE INSPECTION REPORT (CAC NO. MF9683;  
              EPID L-2017-LRO-0009) DATED NOVEMBER 22, 2017

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**ADAMS Accession No. ML17325A779**

**\* Concurred BY SE**

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DATE	11/22/2017	11/22/2017	

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