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

August 28, 2014

Mr. David A. Heacock
President and Chief Nuclear Officer
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: NORTH ANNA POWER STATION UNIT 1 – REVIEW OF THE STEAM GENERATOR TUBE INSERVICE INSPECTIONS DURING THE 2013 REFUELING OUTAGE (TAC NO. MF3424)

Dear Mr. Heacock:

The U.S. Nuclear Regulatory Commission (NRC) staff formally reviews all steam generator (SG) inservice inspection summary reports submitted by licensees in accordance with the plant's Technical Specification requirements. By letter dated January 14, 2014 (Agencywide Documents Access and Management System Accession No. ML14035A067), Virginia Electric and Power Company (the licensee), submitted a report summarizing the results of their fall 2013 steam generator tube inspections at North Anna, Unit 1. The licensee clarified a few minor points during a follow-up phone call, the details of which are summarized in the enclosed report.

The NRC staff has completed its review of the report and concludes that the licensee provided the information required by North Anna, Unit 1, Technical Specifications and that no additional follow-up is required at this time. The NRC staff's review of this report is enclosed.

Please contact me at (301) 415-2597, if you have any questions regarding this issue.

Sincerely,

Dr. V. Sreenivas, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-338

Enclosure: As stated

cc w/encl: Distribution via Listserv

UNITED STATES NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

REVIEW OF THE STEAM GENERATOR TUBE INSERVICE INSPECTION REPORT

NORTH ANNA POWER STATION, UNIT 1

DOCKET NO. 50-338

By letter dated January 14, 2014 (Agencywide Documents Access and Management System Accession No. ML14035A067), Virginia Electric and Power Company (the licensee), submitted a report summarizing the results of their fall 2013 steam generator (SG) tube inspections at North Anna, Unit 1. The U.S. Nuclear Regulatory Commission (NRC) held a follow-up phone call with the licensee to clarify a few minor points of information.

North Anna, Unit 1, has three Westinghouse Model 54F replacement SGs that were installed in 1993, each containing 3,592 thermally treated Alloy 690 tubes. The tubes have a nominal outside diameter of 0.875 inches, a nominal wall thickness of 0.050 inches, and are supported by seven stainless steel tube support plates (TSPs) and a baffle plate. Most of the TSP holes are quatrefoil-shaped. The U-bend region of the tubes in rows one through eight was stress relieved after bending.

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

On June 19, 2014, the licensee clarified the following during a conference call:

1. Two tubes have been plugged in the three SGs. Both tubes are in SG C. One tube was plugged in 1998 and the other was plugged in 2004. No degradation was noted during the 2013 inspections of these plugs. All plugs were in their proper location.

2. Steam drum inspections were performed in all three SGs. No degradation was identified as a result of these inspections. There were some hard deposits on the surfaces of the steam drum components. No blocked broached holes were observed.

3. The feedring was inspected in all three SGs. SG A is the limiting SG in terms of feedring degradation. Repair of the feedrings is scheduled for 2015.

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.

August 28, 2014

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/RA/

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