



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

November 23, 2009

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: SURRY POWER STATION, UNIT NO. 2 - REVIEW OF THE 2008 STEAM  
GENERATOR INSERVICE INSPECTION REPORT (TAC NO. ME0165)

Dear Mr. Heacock:

By letter dated November 14, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML090060111), Virginia Electric and Power Company (Dominion) (the licensee) submitted steam generator tube inspection results from the 2008 inspections at Surry Power Station (SPS), Unit No. 2. By letter dated June 10, 2008 (ADAMS Accession No. ML081490152), the U.S. Nuclear Regulatory Commission (NRC) documented a conference call between the NRC staff and SPS Unit 2 representatives on May 5, 2008. The licensee provided additional information in a letter dated July 13, 2009 (ADAMS Accession No. ML092020251).

The NRC staff 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 staff's review of the reports is enclosed.

Sincerely,

A handwritten signature in black ink, appearing to read "Karen Cotton".

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

Docket No. 50-281

Enclosure:  
Inservice Inspection Report

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REVIEW OF THE 2008 STEAM GENERATOR  
INSERVICE INSPECTION REPORT  
SURRY POWER STATION UNIT 2  
DOCKET NUMBER 50-281

By letter dated November 14, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML090060111), Virginia Electric and Power Company (Dominion) (the licensee) submitted steam generator (SG) tube inspection results from the 2008 inspections at Surry Power Station (SPS), Unit No. 2. By letter dated June 10, 2008 (ADAMS Accession No. ML081490152), the U.S. Nuclear Regulatory Commission (NRC) documented a conference call between the NRC staff and SPS Unit 2 representatives on May 5, 2008. The licensee provided additional information in a letter dated July 13, 2009 (ADAMS Accession No. ML092020251).

SPS Unit 2 has three Model 51F SGs that were replaced in 1980. The replacement SGs were fabricated by Westinghouse. Each SG contains 3,342 thermally treated Alloy 600 tubes. Each tube has 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 length of the tubesheet and are supported by a number of stainless steel tube support plates. 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 their 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.

After review of the information provided by the licensee, the NRC staff has the following comments/observations:

The licensee reported that axial and circumferential indications suggestive of flaws at the hot-leg tube end ID were reported in all three SGs. The indications were identified within 0.2 inches from the tube end. Steam Generator A had 60 tubes with 60 indications (3 axial and 57 circumferential), SG B had 37 tubes with 39 indications (9 axial and 30 circumferential), and SG C had 20 tubes with 21 indications (6 axial and 15 circumferential). Because some of these indications exceeded the Technical Specification repair criteria (e.g., 94° criterion of the interim alternate repair criteria), 3 tubes in SG A, 1 tube in SG B, and 2 tubes in SG C were plugged.

During the SPS Unit 2, spring 2008, end-of-cycle 21 (EOC21), refueling outage, full tubesheet depth, rotating probe examinations were performed in a small number of cold leg tubes. Twelve tubes in SG B and 22 tubes in SG C were examined and the results indicated no degradation.

Enclosure

During the SPS Unit 2, spring 2008, EOC21 refueling outage, bobbin probe inspections of SG B and SG C, in the U-bend region of the low row tubes, which are the tubes with stress relieved U-bends, were evaluated for the offset signal characteristic of elevated residual stress. No elevated residual stress was identified.

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*/RA/*

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

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ADAMS Accession No: ML092940238

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