

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

September 11, 2012

Mr. M. J. Ajluni Nuclear Licensing Director Southern Nuclear Operating Company, Inc. 40 Inverness Center Parkway P. O. Box 1295, Bin - 038 Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNIT 1 – REVIEW OF THE 2011 REFUELING OUTAGE STEAM GENERATOR TUBE INSERVICE INSPECTION REPORT (TAC NO. ME7764)

Dear Mr. Ajluni:

By letters dated June 30 and September 21, 2011 and July 30, 2012, (Agencywide Documents Access Management System (ADAMS) Accession Nos. ML11820361, ML112650199 and ML12212A335, respectively), Southern Nuclear Operating Company, Inc. submitted information summarizing the results of the Spring 2011 steam generator (SG) tube inspections performed during refueling outage 16 (V1 R16) at Vogtle Electric Generating Plant, Unit 1.

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

Sincerely,

Robert E. Martin, Senior Project Manager Plant Licensing Branch II-1 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket No. 50-424

Enclosure: Inspection Summary Report

cc w/encl: Distribution via Listserv



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

# OFFICE OF NUCLEAR REACTOR REGULATION

## REVIEW OF THE 2011 REFUELING OUTAGE STEAM GENERATOR

## TUBE INSERVICE INSPECTION REPORT

## SOUTHERN NUCLEAR OPERATING COMPANY, INC.

## VOGTLE ELECTRIC GENERATING PLANT, UNIT 1

## DOCKET NO. 50-424

By letters dated June 30 and September 21, 2011 and July 30, 2012, (Agencywide Documents Access Management System (ADAMS) Accession Nos. ML111820361, ML112650199 and ML12212A335, respectively), Southern Nuclear Operating Company, the licensee, submitted information summarizing the results of the Spring 2011 steam generator (SG) tube inspections performed during refueling outage 16 at Vogtle Electric Generating Plant, Unit 1 (Vogtle 1).

Vogtle Electric Generating Plant, Unit 1 has four Westinghouse Model F SGs. Each SG has 5,626 thermally treated Alloy 600 tubes with an outside diameter of 0.688 inches and a nominal wall thickness of 0.040 inches. The tubes are hydraulically expanded for the full-depth of the tubesheet at each end. The tubes are supported by stainless steel support plates with quatrefoil-shaped holes. The U-bend region of the tubes installed in rows 1 through 10 was thermally treated after bending in order to reduce stress.

The licensee provided the scope, extent, methods and results of the SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions (i.e., tube plugging, taken in response to the inspection findings). The tubes in SGs 1 and 4 were inspected during this outage. Regions susceptible to cracking (e.g., tubesheet, U-bend of row 1 and 2) were inspected in all four SGs.

After reviewing the information provided by the licensee, the staff has the following comments/observations:

- The licensee identified a single axially oriented outside diameter stress corrosion crack (ODSCC) indication in SG 4 in row 8, column 57. It is located below the bottom of the expansion transition and is entirely within the tubesheet. The tube was plugged.
- There was no evidence of change in the region of SG 4 affected by the tube pulling operation based on the eddy current bobbin probe data.

Based on a review of the information provided, the staff concludes that the licensee provided the information required by the Vogtle 1 Technical Specifications. In addition, the 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.

Principal Contributor: A. Obodoako, NRR/DCI

Date: September 11, 2012

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### /**RA**/

Robert E. Martin, Senior Project Manager Plant Licensing Branch II-1 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

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\* Transmitted by memo dated 8/24/12

#### ADAMS Accession No. ML12249A193

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