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

March 25, 2015

Mr. C. R. Pierce
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
Post Office Box 1295, Bin - 038
Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNIT 2 - REGARDING THE 2013 STEAM GENERATOR TUBE INSPECTIONS (TAC NO. MF4288)

Dear Mr. Pierce:

By letters dated July 2 and September 26, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML13184A269 and ML14170A021), Southern Nuclear Operating Company, Inc. (SNC) submitted information summarizing the results of the spring 2013 steam generator tube inspections performed at Vogtle Electric Generating Plant, Unit 2. The licensee supplemented the information by letters dated January 12, 2015, and February 23, 2015 (ADAMS Accession Nos. ML15013A023 and ML15054A536). These inspections were performed during refueling outage 16 (RFO 16). In a letter dated April 25, 2013 (ADAMS Accession No. ML13112A225), the U.S. Nuclear Regulatory Commission staff summarized two conference calls that were held with the licensee during RFO 16.

The staff has completed its review of the reports and concludes that SNC 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,

Robert Martin

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

Docket No. 50-425

Enclosure: Review of Report

cc w/encl: Distribution via Listserv

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

UNITED STATES NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

REVIEW OF THE FALL 2013 STEAM GENERATOR TUBE INSPECTION REPORT

VOGTLE ELECTRIC GENERATING PLANT, UNIT 2

DOCKET NO. 50-425

By letters dated July 2, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13184A269) and September 26, 2013 (ADAMS Accession No. ML14170A021), Southern Nuclear Operating Company, Inc. (SNC, the licensee) submitted information summarizing the results of the spring 2013 steam generator (SG) tube inspections performed at Vogtle Electric Generating Plant, Unit 2. The licensee supplemented the information by letters dated January 12, 2015 (ADAMS Accession No. ML15013A023) and February 23, 2015 (ADAMS Accession No. ML15054A536). These inspections were performed during refueling outage 16 (RFO 16). In a letter dated April 25, 2013 (ADAMS Accession No. ML13112A225), the U.S. Nuclear Regulatory Commission (NRC) staff summarized two conference calls that were held with the licensee during RFO 16.

Vogtle Electric Generating Plant, Unit 2, has four Westinghouse Model F SGs, each of which contains 5,626 U-bend thermally treated Alloy 600 tubes. Each tube has a nominal outside diameter of 0.688 inches and a nominal wall thickness of 0.040 inches. During SG fabrication, the tubes were hydraulically expanded, at both ends, over the full depth of the tubesheet. The vertical section of the tubes are supported by Type 405 stainless steel support plates with quatrefoil-shaped holes and the U-bend section of the tubes is supported by V-shaped, chrome-plated Alloy 600 anti-vibration bars.

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 (i.e., tube plugging) taken in response to the inspection findings.

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

1. Outside diameter stress corrosion cracking (ODSCC) was identified at Vogtle, Unit 2, during RFO 16. A single circumferential ODSCC indication was identified in SG 2. The licensee expanded their inspection scope to include a +PointTM examination of 20 percent of the tubes in SGs 1 and 4, from 3 inches above to 15.2 inches below the top of the tubesheet on the hot-leg side of the SG. The NRC staff notes that a sampling approach has limitations when the number of indications is small.

2. During a conference call on February 2, 2015, the licensee clarified some of their responses in their January 12, 2015 letter. With respect to inspections for wear due to loose parts near the top of the tubesheet on the cold-leg side of the steam generator, the licensee indicated that the bobbin coil is not qualified to detect wear right at the top of the tubesheet, but that visual inspections were also performed in this region to supplement the bobbin coil inspections. During the call there was some discussion on what the industry's steam generator guidelines indicate regarding the use of qualified techniques and whether there is any guidance on what should be done if there is no qualified technique or if the guidelines are not being followed. The licensee indicated they would review those guidelines.

3. With respect to accident induced leakage, the licensee clarified that they sum the leak rate from all sources of accident induced leakage and compare it to the accident induced leak rate limit for determining whether the accident induced leakage performance criteria was satisfied. This clarification was provided since the response to RAI 6 of the January 12, 2015 letter had this conclusion (i.e., the performance criteria was satisfied) in the middle of their response rather than at the end after all the sources of accident induced leakage were discussed.

Based on a review of the information provided, the staff concludes that the licensee provided the information required by their 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. Huynh

Date: March 25, 2015

March 25, 2015

Mr. C. R. Pierce
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
Post Office Box 1295, Bin - 038
Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNIT 2 - REGARDING THE 2013 STEAM GENERATOR TUBE INSPECTIONS (TAC NO. MF4288)

Dear Mr. Pierce:

By letters dated July 2 and September 26, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML13184A269 and ML14170A021), Southern Nuclear Operating Company, Inc. (SNC) submitted information summarizing the results of the spring 2013 steam generator tube inspections performed at Vogtle Electric Generating Plant, Unit 2. The licensee supplemented the information by letters dated January 12, 2015, and February 23, 2015 (ADAMS Accession Nos. ML15013A023 and ML15054A536). These inspections were performed during refueling outage 16 (RFO 16). In a letter dated April 25, 2013 (ADAMS Accession No. ML13112A225), the U.S. Nuclear Regulatory Commission staff summarized two conference calls that were held with the licensee during RFO 16.

The staff has completed its review of the reports and concludes that SNC 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,

/RA/

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

Docket No. 50-425

Enclosure: Review of Report

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC LPL2-1R/F	RidsAcrsAcnw_MailCTR Resource	GKulesa, NRR
RidsNrrPMVogtle Resource	RidsNrrDorlDpr Resource	KKarwoski, NRR
RidsNrrDorlLpl2-1 Resource	RidsRgn2MailCenter Resource	AJohnson, NRR
RidsNrrLASFigueroa Resource		

ADAMS Accession No.: ML15077A464 *By memo dated

OFFICE	DORL/LPL2-1/PM	DORL/LPL2-1/LA	NRR/DE/ESGB	DORL/LPL2-1/BC	DORL/LPL2-1/PM
NAME	RMartin	SFigueroa	GKulesa	RPascarelli	RMartin
DATE	03/25/15	03/23/15	03/09/15*	03/25/15	03/25/15

OFFICIAL RECORD COPY