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ATTN: Document Control Desk
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Vogtle Electric Generating Plant
Response to NRC Request for Additional Information
Regarding the 2007 Unit 2 (2R12) Steam Generator Tube Inspections

Ladies and Gentlemen:

On January 28, 2008, Southern Nuclear Operating Company (SNC) received a Request for Additional Information (RAI) from the NRC concerning the Vogtle Electric Generating Plant (VEGP) 2007 Unit 2 (2R12) Steam Generator Tube Inspections. The SNC response to the subject RAI is enclosed.

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,


David H. Jones
Vice President – Engineering

DHJ/DRG/daj

Enclosure: Response to NRC Request for Additional Information (RAI)
Regarding the 2007 Unit 2 (2R12) Steam Generator Tube
Inspections

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. T. E. Tynan, Vice President – Vogtle
RType: CVC7000

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Acting Regional Administrator
Mr. S. P. Lingam, NRR Project Manager – Vogtle
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

Vogtle Electric Generating Plant

Enclosure

**Response to NRC Request for Additional Information (RAI)
Regarding the 2007 Unit 2 (2R12) Steam Generator Tube Inspections**

Enclosure

Response to NRC Request for Additional Information (RAI) Regarding the 2007 Unit 2 (2R12) Steam Generator Tube Inspections

1. NRC Question

For each refueling outage and steam generator tube inspection outage since the steam generators were placed in service, please provide the cumulative effective full power months the steam generator has operated.

SNC Response

Steam generator (SG) tubing eddy current examinations were conducted in each of the outages listed in the following table. The elapsed effective full power months (EFPM) from start of Vogtle Unit 2 commercial operation until the associated outage is listed in the following table.

<u>Refueling Outage</u>	<u>Cumulative EFPM</u>
2R1	15.0
2R2	29.8
2R3	45.5
2R4	60.9
2R5	78.2
2R6	95.0
2R7	111.9
2R8	128.9
2R9	146.1
2R10	161.9
2R11	177.4
2R12	192.7

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2. NRC Question

Regarding the scope of examinations in the U-bend region of rows 1 and 2, please confirm that you have examined all of the tubes (in this region) prior to the completion of your current inspection period (presumably the 90 effective full power month period).

SNC Response

Eddy current inspection scope performed during the 2R12 outage and prior outages within the current inspection period has resulted in 100% of Rows 1 and 2 U-bends in steam generators (SG) 1, 2, 3, and 4 having been inspected during the current inspection period. The current inspection period is the 90 effective full power months (EFPM) sequential period; the upcoming fall outage (2R13) is the last planned SG eddy current inspection in the 90 EFPM sequential period.

3. NRC Question

You indicated that the steam generators were chemically cleaned during your 2007 outage. Please discuss the results of the chemical cleaning.

SNC Response

The chemical cleaning, along with the follow-up mechanical cleaning techniques removed 4,957 pounds of deposits from the SG secondary side of the four Vogtle Unit 2 SGs.

4. NRC Question

Please discuss the scope and results of any secondary side inspections.

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SNC Response

Discussed in paragraphs (1) through (4) below are the four types of SG secondary-side inspections performed during the Vogtle 2R12 outage.

(1) SG Foreign Object Search and Retrieval (FOSAR) inspection

The inspection scope for the SG FOSAR inspections performed during the Vogtle 2R12 outage was the periphery of the tube bundle at the top-of-tubesheet (TTS) and the no-tube-lane at the TTS for all four SGs. The results were that two small-diameter wires and a small screw were detected and removed. Minimal TTS scale deposit was detected and no anomalous conditions were observed.

(2) Inspection of potential loose parts wear volumetric flaws

The indications potentially attributable to loose parts wear which were detected in the SG eddy current inspection were visually inspected on the secondary side. These inspections were performed in SG 2 for the Row 1 Column 46 tube in response to a differential free span signal (DFI) on the hot leg (HL) side at 9.4 inches above the TTS and a volumetric indication on the cold leg (CL) side at 10.7 inches above the TTS. The visual inspections confirmed the eddy current program conclusions that no tubing defect had occurred at the noted location on the HL side and that there was a volumetric indication at the noted location on the CL side. No foreign objects were detected in relation to SG 2 Row 1 Column 46.

(3) Inspections using the Consolidated Edison Combined Inspection and Lance (CECIL) system

The CECIL system was deployed in the VEGP Unit 2 SGs for the purpose of cleaning and inspecting the TTS after the 2R12 chemical cleaning was completed. The intertube inspection portion of the system was deployed down several HL side columns in the manway and nozzle sides in SGs 1 and 4. The initial inspections performed in the CECIL deployment, prior to intertube water lancing in SG 1 and SG 4, found small amounts of hard scale deposit. A foreign object was observed in SG 1; the object was later removed by FOSAR as described in paragraph (1) above. The inspections performed after completion of the CECIL cleaning showed that there were no additional foreign objects or scale observed, except for residual amounts of hard deposit.

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(4) In-bundle inspections above the 7th tube support plate (TSP)

In-bundle inspections were performed above the 7th TSP in all the rows of CL and HL columns 77-78, 87-88, 97-98, and 107-108. The columns were found to be free of foreign objects and sludge. The quatrefoil lobes and lands were clean and open. No anomalous conditions were observed in the 7th TSP inspection.

5. NRC Question

Please confirm that the "one non-pluggable volumetric indication" is the same volumetric indication that was reported in steam generator 2 in row 1 column 46. Please also confirm that the indication was attributed to wear and that the indication is "non-pluggable" because it did not exceed the tube repair criteria (rather than the tube could not be plugged). In addition, discuss the cause of the wear (e.g., interaction with cleaning equipment, etc.)

SNC Response

The "one non-pluggable volumetric indication" is the same volumetric indication that was reported in the SG 2 tube at Row 1 Column 46 at approximately 11 inches above the TTS on the CL side. This tube was not plugged, because the measured depth of the volumetric indication using qualified sizing techniques was 21% through-wall, which is less than the tube repair criteria. This indication is interpreted as a wear scar associated with 2R11 secondary side maintenance tooling.