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SOUTHERN COMPANY
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U. S. Nuclear Regulatory Commission
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Vogtle Electric Generating Plant
Response to NRC Request for Additional Information
Regarding the 2005 Unit 2 (2R11) Steam Generator Tube Inspection Report

Ladies and Gentlemen:

On July 17, 2006, Southern Nuclear Operating Company (SNC) received four questions by facsimile from the staff concerning the Vogtle Electric Generating Plant (VEGP) 2005 Unit 2 (2R11) Steam Generator Tube Inspection Report, dated January 11, 2006. The SNC response to these questions is enclosed.

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

Sincerely,

Don E. Grissette

DEG/LPH/sdl

Enclosure: SNC Response to NRC Request for Additional Information

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

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Mr. C. Gratton, NRR Project Manager – Vogtle
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

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Enclosure

1. NRC Question

On page 1 of your January 11, 2006, report, you stated that you performed +Point rotating pancake coil examinations of 60-80 tubes at tube support plates 6 and 7 on the hot leg side to gage quatrefoil blockage by deposits. Please discuss the results of this investigation.

SNC Response

Deposit in the bundle is largely concentrated on the hot leg (HL) side, in the upper portion, of the bundle. TSP-specific discussion for the upper portion follows:

TSP7
The lobes through which the water-steam mixture flows up through the tube bundle are not blocked on the HL side; however, at TSP 7 on the HL side, there are some quatrefoil lobes which are partially blocked by rings of deposit on the tube on the bottom side of the TSP, with one location estimated at 20-30% blocked.

There are no observable gaps between the tubes and tube support plate (TSP) quatrefoil lands on the HL side for TSP 7; the deposit on the tube and TSP merge to form a continuous field. The gaps between the tubes and tube support plates on the cold leg (CL) side are visible, and only partially filled in a fraction of the tubes.

TSP6
The lobes through which the water-steam mixture flows up through the tube bundle are not blocked on the HL side.

The gaps between the tubes and tube support plate (TSP) quatrefoil lands on the hot leg (HL) side are mostly not visible for TSP 6. The gaps are largely unfilled on the CL side.

The limited partial quatrefoil blockage described above has not resulted in a discernible impact on SG level control. Chemical cleaning of the VEGP Units 1 and 2 SG's for removal of deposit from the secondary-side of the tube bundle and the top of the tubesheet (TTS) is planned for Unit 1 in fall 2006 and in Unit 2 in spring 2007.

2. NRC Question

Please confirm that no crack-like indications were identified at Vogtle Unit 2 during the 2005 steam generator (SG) tube inspections.

SNC Response

No crack-like indications were identified in the Vogtle Unit 2 2005 outage (2R11) SG tubing eddy current inspections.

3. NRC Question

On page 2 of your January 11, 2006, report, you indicated that possible loose parts indications were identified during the inspection. Please discuss whether a foreign object search and retrieval was performed on each SG. If so, please discuss the scope and results. If any loose parts were identified, discuss whether the loose parts were removed. If the parts were not removed or the locations were not visually inspected, please discuss the results of any evaluations performed to ensure these parts (or suspected parts) would not result in a loss of tube integrity for the period of time between inspections.

SNC Response

Foreign object search and retrieval (FOSAR) was performed on all four Vogtle Unit 2 SGs. The standard FOSAR scope is comprised of visual inspection using remote video camera technology of the annulus area at the TTS and the tubelane which runs through the center of the tube bundle at the TTS. The possible loose parts (PLP) indications were only in SG1; for SG1 only, additional FOSAR scope was the PLP locations.

Information regarding FOSAR results is provided below on an SG-specific basis.

SG1

No tube damage was observed. An evaluation was performed to justify leaving SG1 Foreign Object #3 in the SG based on conservative analyses showing that there would not be a loss of tube integrity within the next 3 years, which allows another FOSAR to be performed at that location before the end of the 3 year period.

Object Description	Object Location		Retrieval Attempted	Object Removed	Length	Height	Width
1. Wire	HL	C35 R15/16	Yes	Yes	3/8"	1/64"	1/64"
2. Sludge Rock	HL	C106 R13/14	Yes	Yes	1/8"	1/8"	1/8"
3. Scale or metal turning		Tube lane	Yes	No	1/4"	1/32"	1/8"

SG2

No tube damage was observed.

Object Description	Object Location		Retrieval Attempted	Object Removed	Length	Height	Width
1. Wire		Tube lane	Yes	Yes	5/8"	1/64"	1/64"
2. Sludge Rock		Tube lane	Yes	Yes	1/8"	1/8"	1/8"

SG3
No foreign objects were observed.

SG4
Wear scars were visible on column 93, row 42. This scarring was caused by SG4 foreign object #5.

Object Description	Object Location		Retrieval Attempted	Object Removed	Length	Height	Width
1. Wire	HL	Annulus	Yes	Yes	1 1/4"	1/64"	1/64"
2. Wire		Tube lane	Yes	Yes	1"	1/64"	1/64"
3. 6/32" X 1/8" screw		Tube lane	Yes	Yes	6/32"	1/8"	-
4. Wire / flex gasket		Tube lane	Yes	Yes	1/5"	3/16"	3/16"
5. Two Twisted Tie Wires	CL	C93/94 R41/42	Yes	Yes	2 1/4"	1/16" dia.	1 1/2"
6. Sludge Rock		Tube lane	Yes	Yes	1/4"	3/16"	1/32"

4. NRC Question

On page 7 of your January 11, 2006, report, you reported that one tube (row 12 column 57) in steam generator 4 had an indication at the top of the tubesheet in the hot leg side that measured 14 percent through-wall. Please discuss the nature and cause of this indication.

SNC Response

This indication is categorized as a volumetric flaw (VOL three letter code), and is assessed as a wear scar, residual from a prior foreign object. This VOL indication was first reported in the 2R10 outage (spring 2004), and sized at 18% through-wall depth (TW). A history lookup was performed for the tube during the 2R10 inspection and it was determined that volumetric signals pre-existed the 2R10 VOL in 2R9 (fall 2002), and that no growth had taken place since the 2R9 eddy current inspection. Based on the 14% TW depth reported in 2R11, the indication has exhibited no growth. It is apparent that an itinerant foreign object is responsible for the wear detected which probably took place during the period from 1999 (2R7 outage) to 2002. No possible loose part signals (PLP three letter code) were reported for the tube at R12C57 during the 2R11, 2R10, 2R9, or 2R7 outages.