SCE&G®
A SCANA COMPANY

November 8, 2000
RC-00-0345

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Gentlemen:

Subject: VIRGIL C. SUMMER NUCLEAR STATION
DOCKET NO. 50/395
OPERATING LICENSE NO. NPF-12
SPECIAL REPORT (SPR 2000-005)

Stephen A. Byrne
Vice President
Nuclear Operations
803.345.4622

South Carolina Electric & Gas Company (SCE&G) is submitting this report pursuant to the requirements of Technical Specification Surveillance Requirement 4.4.5.5.a. & b. This inspection constitutes the "Twelfth Inservice Inspection" of Steam Generator tubes.

- Section 4.4.5.5.a requires that the number of tubes plugged or repaired in each generator be reported in a Special Report within15 days following the completion of each inservice inspection of steam generator tubes. The inspection activity during Refueling Outage 12 at the Virgil C. Summer Nuclear Station was completed on October 27, 2000.

  Summarized in the table below is the number of plugs installed in each generator as a result of the inspections performed during this outage.

Generator	A	B	C
No. Plugged in RF-12	3	0	2
Previously Plugged	0	1	2
Total Tubes Plugged	3	1	4

  The tube plugging which occurred this outage resulted from non-service related issues (failure to properly expand the tube ends during the manufacturing process).

- Section 4.4.5.5.b requires that within 12 months following the completion of the inservice inspection of the generators, the complete results will be submitted to the Commission as a Special Report. This information is provided below and in the attached eddy current examination reports:

South Carolina Electric & Gas Co.
Virgil C. Summer Nuclear Station
P. O. Box 88
Jenkinsville, South Carolina
29065

803.345.5209
803.635.1467

A001

1. **Number and extent of the tubes inspected.**

Steam Generator "A" – 6,307 tubes (100%) Bobbin Exam Full Length

Steam Generator "B" – 6,306 tubes (100%) Bobbin Exam Full Length
- 322 tubes top of tubesheet
- approximately 5% Hot Leg

Steam Generator "C" – 6,305 tubes (100%) Bobbin Exam Full Length
- 14 tubes row one +point u-bend
- 2 separate exams using a high frequency coil arrangement and a mid range coil.
- Approximately 20% Row One

2. **Location and percent of wall-thickness penetration for each indication of an imperfection.**

Steam Generator "A" - A possible loose part was reported in RF-11 between R89-C62 and R88-C63 at the top of the tubesheet. A small piece of wire was removed from this location during RF-12 and the possible loose part (PLP) indication was no longer present.

Two tubes were found to have wear like indications at the anti-vibration bars.

- Tube R19-C140 was found to have a wear like indication with an estimated depth of 9% at AV7.
- Tube R26-C139 was found to have a wear like indication with an estimated depth of 5% at AV2 and 9% at AV7.

All three of the wear like indications were found to be apparent in the review of the 1994 pre-service inspection and all three were very similar to the results found in the RF-12 inspection. This would indicate they were present during pre-service.

3. **Identification of tubes plugged.**

- **Steam Generator "A"**
  1. Row 25 Column 26 NTE
  2. Row 25 Column 31 NTE
  3. Row 94 Column 51 NTE

- **Steam Generator "C"**
  1. Row 99 Column 100 NTE
  2. Row 57 Column 96 NTE

Should you have any questions regarding these inspection results, please call Mr. Charles J. McKinney at (803) 345-4723.

Very truly yours,

Stephen A. Byrne

CJM/SAB
Attachment

c: N. Lorick
T. G. Eppink
R. J. White
L. A. Reyes
K. R. Cotton
NRC Resident Inspector
J. B. Knotts, Jr.
INPO Records Center
RTS (O-L-99-0193)
File (818.08)
DMS (RC-00-0345)

FRAMATOME TECHNOLOGIES

A summary of the results of the ET examination of Steam Generator "A" is shown below:

STEAM GENERATOR "A" Bobbin Examination		
Indication	Total # of Indications	Total # of tubes w/ Indications
RWS	3	2
DSI	1	1
DNG	6	6
DNT	92	85
FSH	28	23
FSI	0	0
NTE	3	3
PLP	*2	2
INR	83	78
TOTAL	218	200
Tubes Examined	**6307**	

* The actual loose part causing the PLP indications in S/G "A" was removed from the steam generator

RWS Rerun Wear Scar – Retest with Bobbin coil and sizing wear scar standard
DSI Distorted Support Indication
DNG Ding – Diameter reduction in freespan
DNT Dent – Diameter reduction at support structure
FSH Freespan Signal, History (All FSH's reported were researched back to the 1994 Baseline Exam, and found to be unchanged since the baseline.)
FSI Free Span Indication
NTE No Tube Expansion
PLP Possible Loose Part
INR Indication Not Reportable

STEAM GENERATOR "A" Rotating Coil Examination		
Indication	Total # of Indications	Total # of tubes w/ Indications
WAR	3	2
VOL	4	3
PLP	0	0
TOTAL	7	5
Locations Examined	**28 Special Interest**	

WAR Wear Indication
VOL Volumetric Indication (FSH reported in bobbin exam; indicative of Manufacturing Burnish Mark with Rotating Coil Examination)
PLP Possible Loose Part (PLP reported in bobbin exam; confirmed as a possible loose part by Rotating Coil Exam) PLP's were removed from "A" SG.

FRAMATOME TECHNOLOGIES

A summary of the results of the ET examination of Steam Generator "B" is shown below:

STEAM GENERATOR "B" Bobbin Examination		
Indication	Total # of Indications	Total # of tubes w/ Indications
RWS	0	0
DSI	0	0
DNG	6	6
DNT	94	86
FSH	9	9
FSI	8	4
NTE	0	0
PLP	0	0
INR	57	55
TOTAL	174	160
Tubes Examined	**6306**	

RWS Rerun Wear Scar – Retest with Bobbin coil and sizing wear scar standard
DSI Distorted Support Indication
DNG Ding – Diameter reduction in freespan
DNT Dent – Diameter reduction at support structure
FSH Freespan Signal, History (All FSH's reported were researched back to the 1994 Baseline Exam, and found to be unchanged since the baseline.)
FSI Free Span Indication
NTE No Tube Expansion
PLP Possible Loose Part
INR Indication Not Reportable

STEAM GENERATOR "B" Rotating Coil Examination		
Indication	Total # of Indications	Total # of tubes w/ Indications
WAR	0	0
VOL	1	1
PLP	0	0
TOTAL	1	1
Locations Examined	**16 Special Interest, 322 Hot Leg Top of TS**	

WAR Wear Indication
VOL Volumetric Indication (FSH reported in bobbin exam; indicative of Manufacturing Burnish Mark with Rotating Coil Examination)
PLP Possible Loose Part (PLP reported in bobbin exam; confirmed as a possible loose part by Rotating Coil Exam)

FRAMATOME TECHNOLOGIES

A summary of the results of the ET examination of Steam Generator "C" is shown below:

STEAM GENERATOR "C" Bobbin Examination		
Indication	Total # of Indications	Total # of tubes w/ Indications
RWS	0	0
DSI	0	0
DNG	11	11
DNT	44	42
FSH	25	24
FSI	15	5
NTE	2	2
PLP	*2	2
INR	129	116
TOTAL	228	202
Tubes Examined	**6305**	

*The tubes that contained the bobbin PLP indications were examined with plus+point, which confirmed only the presence of sludge.

RWS Rerun Wear Scar – Retest with Bobbin coil and sizing wear scar standard
DSI Distorted Support Indication
DNG Ding – Diameter reduction in freespan
DNT Dent – Diameter reduction at support structure
FSH Freespan Signal, History (All FSH's reported were researched back to the 1994 Baseline Exam, and found to be unchanged since the baseline.)
FSI Free Span Indication
NTE No Tube Expansion
PLP Possible Loose Part
INR Indication Not Reportable

STEAM GENERATOR "C" Rotating Coil Examination		
Indication	Total # of Indications	Total # of tubes w/ Indications
WAR	0	0
VOL	5	5
PLP	0	0
TOTAL	5	5
Locations Examined	**21 Special Interest, 14 Low Row Ubend (HF & MR PP)**	

WAR Wear Indication
VOL Volumetric Indication (FSH reported in bobbin exam; indicative of Manufacturing Burnish Mark with Rotating Coil Examination)
PLP Possible Loose Part (PLP reported in bobbin exam; confirmed as a possible loose part by Rotating Coil Exam) PLP's in SG "C" were identified as sludge.