

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 22, 2012

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

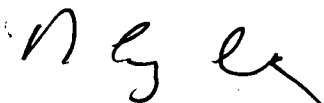
Serial No. 12-392
SPS LIC/CGL R0
Docket No. 50-281
License No. DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNIT 2
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
2011 STEAM GENERATOR INSERVICE INSPECTION REPORT

By letter dated October 5, 2011 (Serial No. 11-495), Virginia Electric and Power Company (Dominion) submitted information summarizing the results of steam generator (SG) tube inspections performed at Surry Power Station Unit 2 during the Spring 2011 refueling outage. On May 23, 2012, the NRC requested additional information related to the SG inspections. The NRC's questions and Dominion's responses are provided in the attachment to this letter.

If you have any questions or require additional information, please contact Ms. Candee Lovett at (757) 365-2178.

Very truly yours,



N. L. Lane
Site Vice President
Surry Power Station

Attachments:

1. Response to NRC Request for Additional Information Regarding 2011 Steam Generator Inservice Inspection Report - Surry Power Station Unit 2
2. List of Acronyms from Letter Serial No. 11-495 (Attachment page 13 of 13) - Surry Power Station Unit 2

Commitments made in this letter: None

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NRR

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ATTACHMENT 1

**Response to NRC Request for Additional Information Regarding
2011 Steam Generator Inservice Inspection Report**

Surry Power Station Unit 2

**Virginia Electric and Power Company
(Dominion)**

By letter dated October 5, 2011 (Serial No. 11-495), Virginia Electric and Power Company (Dominion) submitted steam generator (SG) tube inspection results from the 2011 inspections at Surry Unit 2. On May 23, 2012, the NRC requested additional information related to the SG inspections. The NRC questions and Dominion's response are provided below.

NRC Question 1

The staff understands that a hole was discovered in a riser barrel in the steam generator upper internals. As a result, further inspections of this area were performed and several riser barrels were repaired with 3/4" inconel plates. Please discuss the nature and cause of the holes. Please discuss the scope and results of any other secondary side inspections other than those discussed on page 3 of the attachment to your October 5, 2011 letter.

Dominion Response

During the feedring replacement work in SG "A," a hole in one of the primary separator riser barrels was identified coincident with a J-Nozzle overspray location. The riser barrel arrangement is configured into two concentric circles. The outer circle consists of twelve evenly spaced riser barrels located on the outside of the feedring (between the feedring and steam drum ID). The remaining four riser barrels, forming the inner circle, are located on the inside of the feedring.

Ultrasonic (UT) wall-thickness measurements were performed on six of the sixteen SG "A" riser barrels which visually showed J-Nozzle overspray. The regions, which had reduced wall thickness, were addressed by welding an Inconel patch plate over the affected areas. Inconel patch plates were previously installed on the susceptible riser barrels in SGs "B" and "C," and the J-nozzles on the replacement feedrings in all three SGs are orientated such that the spray does not impinge on the riser barrels.

The discussion on page 3 of the attachment to the October 5, 2011 letter reflects the secondary side inspections completed. No other secondary side inspections were performed.

NRC Question 2

Please clarify the nature/cause of the previous indications in the tubesheet in Table 2.

Dominion Response

The previous indications referred to in Table 2 include previously identified tube degradation, as well as locations of interest monitored due to previous foreign object indications. The tubes identified had indications caused by previous loose parts at or near the Top of Tubesheet. None of the tubes indicated had loose parts in the area of these indications.

NRC Question 3

Please clarify the nature/extent of the tube with the restriction in Table 2.

Dominion Response

The tube with the restriction (SGC R1 C58) has a relatively large historical dent at the top of the tubesheet on the cold leg. The dent prevents passage of the 0.720 inch diameter bobbin probe but permits passage of the 0.700 inch diameter bobbin probe. To ensure effective examination of the tube, the entire cold leg and u-bend of this tube were examined with a +Point probe (the hot leg was examined with a 0.720 inch diameter bobbin probe). No degradation was identified.

NRC Question 4

There is a column titled "Foreign Object Remaining?" in Table 5. Was the determination of no object remaining based on visual inspections of the areas? If not, discuss the basis for determining whether a foreign object was present.

Dominion Response

The determination in Table 5 of no object remaining is based either on visual examination results, eddy current examination results, demonstrated absence of degradation advancement, or a combination of this information. For most, the basis of the determination is the absence of an eddy current +point probe foreign object indications at or near the flaw location. This determination is further supported by the demonstrated absence of flaw growth through multiple cycles of operation.

NRC Question 5

There are several locations where the indication was "initially reported" in 2011, yet there were signals present in prior outages in Table 5. For all the tubes for which this is the case, was the prior presence of the signal based on re-analysis of prior cycle data? Please clarify this item.

Dominion Response

Yes, for the cases where the indication is noted as initially reported in 2011 and for which a prior signal was present, the determination was based on a re-analysis of prior outage data.

NRC Question 6

The pages of the attachment to your October 5, 2011 letter are numbered "x" of 13. The NRC received 12 pages. Please provide the missing page.

Dominion Response

Page 13 of 13 in the Attachment to the October 5, 2011 letter was the list of acronyms used. A copy of that page is included in Attachment 2 to this letter.

ATTACHMENT 2

List of Acronyms from Letter Serial No. 11-495 (Attachment page 13 of 13)

Surry Power Station Unit 2

**Virginia Electric and Power Company
(Dominion)**

Acronyms

ARC	Alternate Repair Criteria
AVB	Anti Vibration Bar
BCX	Cold Leg BET
BET	Bottom of the expansion transition
BHX	Hot Leg BET
BLG	Bulge
BPH	Baffle Plate Hot
C	Column
CM	Condition Monitoring
CMOA	Condition Monitoring Operational Assessment
C/L	Cold Leg
DEP	Deposit
DMT	Deposit Management Treatment
DNG	Ding
DNT	Dent
ECT	Eddy Current Testing
EFPY	Effective Full Power Years
EOC	End of Cycle
ETSS	Eddy Current Technical Specification Sheets
FAC	Flow Assisted Corrosion
FB	Fan Bar
FDP	Flow Distribution Baffle
FO	Foreign Object
FOSAR	Foreign Object Search and Retrieval
GPD	Gallons Per Day
LGV	Localized Geometric Variation
H/L	Hot Leg
LPI	Loose Part Indication
MBH	Historical Manufacturing Brandish Mark
MBM	Manufacturing Burnish Mark
MRPC	Motorized Rotating Pancake Coil
NOP	Normal Operating Pressure
NTE	No tube Expansion
NQH	Non-Quantifiable Historical Indication
NQI	Non-Quantifiable Indication
OA	Operation Assessment
OD	Outer Diameter
ODSCC	Outside Diameter Stress Corrosion Cracking
OVR	Over Roll
EXP	Over Expansion
PLP	Possible Loose Part
PTE	Partial Tubesheet Expansion
PVN	Permeability Variation
PWSCC	Primary Water Stress Corrosion Cracking
% TW	Percent Throughwall
R	Row
RPC	Rotating Pancake Coil
SG	Steam Generator
SLG	Sludge
SAI	Single Axial Indication
SCI	Single Circumferential Indication
SSI	Secondary Side Inspection
SVI	Single Volumetric Indication
Tavg	Average Reactor Coolant System Temperature
TEC	Tube End Cold-leg
TEH	Tube End Hot-leg
TSC	Top of Tube Sheet Cold-leg
TSH	Top of Tube Sheet Hot-leg
TSP	Tube Support Plate
TTS	Top of Tubesheet
TW	Through Wall
UT	Ultrasonic Testing
VOL	Volumetric Indication
WAR	Wear Indication