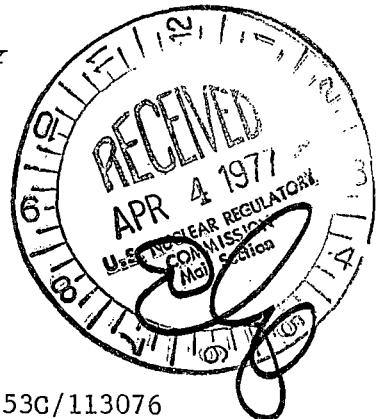


VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

March 30, 1977

Regulatory Docket File



Mr. Benard G. Rusche
Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial No. 353C/113076
PO&M/ALH:dgt
Docket Nos. 50-280
50-281

Attn: Mr. Robert W. Reid, Chief
Operating Reactors Branch 4

License Nos. DPR-32
DPR-37

Dear Mr. Rusche:

During the final pressurization of Surry 2A steam generator following tube plugging, an additional tube was observed to have a suspected leak. The rate of leakage was extremely small, at a secondary to primary pressure of approximately 700 psid and attempts to verify that a through-wall defect was present, as well as its specific elevation were not successful. Thus, an eddy current test and gauging program was performed in the vicinity of the suspect tube. The tube has coordinates of R46C41.

Because of the proximity of this tube to the tube support patch plate, the EC test program was patterned to test those tubes on either side of the patch plate seam. This pattern which consist of probing 141 tubes is shown in Figure 1. As shown, some additional tubes were probed across the center of the patch plate to determine its general condition. The patch plate is a square section of each support plate which is removed during SG manufacture to facilitate the tubing operation. The patch plate is re-inserted in position as one of the final steps in tubing the bundle.

Each tube was examined by .700" eddy current probe and each tube that would not pass the .700" probe was examined with a .610" probe. Any tube that failed to pass the .610" probe was examined with a .540" probe. All of the 141 tubes examined passed the .700" probe except 17. These seventeen tubes all passed the .610" probe except for the one tube. This shows that although dented, the tubes are not subjected to severe diameter ovalization as was found in some tubes close to the tube lane. The one exception is R40C48 which would not pass the 0.540" probe beyond the first support plate from the hot leg side, but passed the 0.540 probe from the cold leg side.

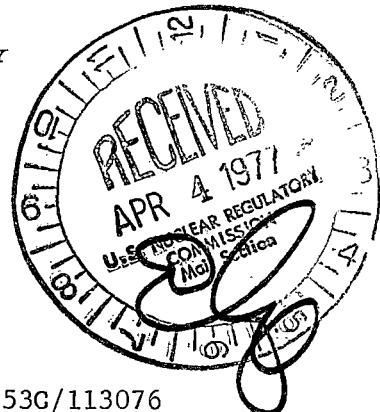
The eddy current strip charts and magnetic tape recordings generated in the inspection of SG A in Surry No. 2 were reviewed at the Westinghouse R&D Laboratories. Two of the tubes which exhibited strip chart traces containing vertical component saturation produced CRT patterns which were sufficiently

770950367

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

March 30, 1977

Regulatory Docket File



Mr. Benard G. Rusche
Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial No. 353G/113076
PO&M/ALH:dgt
Docket Nos. 50-280
50-281

Attn: Mr. Robert W. Reid, Chief
Operating Reactors Branch 4

License Nos. DPR-32
DPR-37

Dear Mr. Rusche:

During the final pressurization of Surry 2A steam generator following tube plugging, an additional tube was observed to have a suspected leak. The rate of leakage was extremely small, at a secondary to primary pressure of approximately 700 psid and attempts to verify that a through-wall defect was present, as well as its specific elevation were not successful. Thus, an eddy current test and gauging program was performed in the vicinity of the suspect tube. The tube has coordinates of R46C41.

Because of the proximity of this tube to the tube support patch plate, the EG test program was patterned to test those tubes on either side of the patch plate seam. This pattern which consist of probing 141 tubes is shown in Figure 1. As shown, some additional tubes were probed across the center of the patch plate to determine its general condition. The patch plate is a square section of each support plate which is removed during SG manufacture to facilitate the tubing operation. The patch plate is re-inserted in position as one of the final steps in tubing the bundle.

Each tube was examined by .700" eddy current probe and each tube that would not pass the .700" probe was examined with a .610" probe. Any tube that failed to pass the .610" probe was examined with a .540" probe. All of the 141 tubes examined passed the .700" probe except 17. These seventeen tubes all passed the .610" probe except for the one tube. This shows that although dented, the tubes are not subjected to severe diameter ovalization as was found in some tubes close to the tube lane. The one exception is R40C48 which would not pass the 0.540" probe beyond the first support plate from the hot leg side, but passed the 0.540 probe from the cold leg side.

The eddy current strip charts and magnetic tape recordings generated in the inspection of SG A in Surry No. 2 were reviewed at the Westinghouse R&D Laboratories. Two of the tubes which exhibited strip chart traces containing vertical component saturation produced CRT patterns which were sufficiently

770950367

distinct in character to warrant closer examination. These tubes were R46C41HL and R46C54HL. For tube R46C41, the first and second TSP intersections seem most likely to have large dents; the signal from the third TSP intersection is more complex, suggesting the influence of another type of discontinuity, possibly a flaw. On the third TSP intersection of R46C54, the resulting signal, while complex in structure, appears closer in character to those produced on R46C41 at the first and second TSP levels; thus it is most likely that this signal results from a large dent but the influence of a possible flaw cannot be excluded. Tube R46C54 is located at an adjacent corner of the patch plate at a simular location as R46C41.

All other TSP and tubesheet intersections reviewed produced signals which could be interpreted as dents. No obvious anomalies were found among these signals.

Based on the EC test and gauging results, tubes R46C41, R46C54, and R40C48 were plugged, although for the latter there was no indication of tube distress other than its reduced diameter. This information contained in this letter supplements the inspection and plugging program described in our letter to Mr. Benard C. Rusche dated March 21, 1977.

Very truly yours,


C. M. Stallings
Vice President-Power Supply
and Production Operations

cc: Mr. Norman C. Moseley