

May 29, 2003

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

Subject: Duke Energy Corporation  
Oconee Nuclear Station, Unit 3  
Docket No. 50-287  
End-of-Cycle-20 Steam Generator Tube Inspection -  
Report on Indication of Circumferential Defects

The Oconee Facility Operating License, DPR-55, License Condition No. 5, requires that following each inservice inspection of Steam Generator (SG) tubes, the Nuclear Regulatory Commission be provided information concerning any circumferential crack indications identified during the inspection. The information specified by the License Condition is provided below:

1. Describe indications of circumferential cracking in the secondary side roll (lower roll in the upper tubesheet or upper roll in the lower tubesheet) if re-rolled.

There was one circumferential indication in the upper transition of a re-rolled tube in the upper tubesheet. The indication had an arc length of 0.92 inches with a Percent Degraded Area (PDA) of 29% through wall (TW). The tube was plugged.

2. Describe indications of circumferential cracking in the original roll or heat affected zone adjacent to the tube-to-tubesheet seal weld if no re-roll is present.

There were two circumferential indications in tubes that were not previously re-rolled. Neither of these tubes were predicted to fail due to the estimated LBLOCA axial load. One indication was located in the clad area near the heat-affected zone of the tube-to-tubesheet weld. The indication had an arc length of 0.18 inches with a PDA of 1% TW. One indication was located in the original roll transition. The indication had an arc length of 0.22 inches with a PDA of 5% TW. Both tubes were re-rolled.

3. Provide the best-estimate total leakage that would result from an analysis of the limiting Large Break Loss of Coolant Accident (LBLOCA) based on circumferential cracking in the original tube-to-tubesheet rolls, tube-to-tubesheet re-rolls, and heat affected zones of seal welds as found during each inspection.

Duke's best estimate of the above-described leakage is <1 gpm based on circumferential indications in the above mentioned tubes. This estimate leakage would maintain offsite dose well below the limits of 10 CFR 100.

Please contact Robert Douglas at 864-885-3073 with any questions regarding this submittal.

Very Truly Yours,

A handwritten signature in black ink that reads "Bruce Hamilton" followed by a stylized flourish or "for" mark.

R. A. Jones  
Site Vice President,  
Oconee Nuclear Station

xc: L.A. Reyes  
Administrator, Region II

M. C. Shannon  
NRC Senior Resident Inspector  
Oconee Nuclear Station

L. N. Olshan  
NRR, Project Manager