Duke Power
A Duke Energy Company

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

Subject: Duke Energy Corporation
Oconee Nuclear Station, Unit 1
Docket No. 50-269
End-of-Cycle-19 Steam Generator Tube Inspection -
Report on Indication of Circumferential Cracks

The Oconee Facility Operating License, DPR-38, 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 rerolled.

   One tube with a circumferential indication was identified in the upper transition of a re-rolled tube. The indication was not in the re-rolled portion but outside the pressure boundary. The indication had an arc length of 46 degrees and an average depth of 28% 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 reroll is present.

   Thirty-two (32) tubes had circumferential indications which had not been previously re-rolled. All were located in the clad area near the heat-affected zone of the tube-to-tubesheet weld. All 32 tubes were rerolled.

   One other tube had a circumferential indication in the hard roll adjacent to the roll transition. The indication had a circumferential extent of 52 degrees and an average depth of 34 % TW. The tube was re-rolled.

   None of the above 33 tubes were predicted to fail due to the estimated LBLOCA axial load.

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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 rerolls, and heat affected zones of seal welds as found during each inspection.

   Duke's best estimate of the above-described leakage is 1.5 gpm based on circumferential indications in the rerolled 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,

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