

February 28, 2008

Mr. Bruce H. Hamiton  
Vice President, Oconee Site  
Duke Power Company LLC  
7800 Rochester Highway  
Seneca, SC 29672

SUBJECT: REVIEW OF OCONEE NUCLEAR STATION, UNIT 2 STEAM GENERATOR  
TUBE INSPECTION REPORTS FOR THE MAY 2007  
(EOC 22) OUTAGE (TAC NO. MD6865)

Dear Mr. Hamilton:

By letter dated August 28, 2007, Agencywide Documents Access and Management System (ADAMS) Accession No. ML072480158, you submitted information summarizing the results of the 2007 steam generator (SG) tube inspections at Oconee Nuclear Station, Unit 2. Additional information concerning the 2007 SG tube inspections at Unit 2 was summarized in our letter dated July 17, 2007 ADAMS Accession No. ML071930126.

We completed our review of these reports and conclude that you provided the information required by the technical specifications and that no additional follow-up is required at this time. Our review of the reports is enclosed.

Sincerely,

**/RA/**

Leonard N. Olshan, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-270

Enclosure:  
Inspection Summary Report

cc w/encl: See next page

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DATE	2/27/08	2/27/08	2/1/08	2/28/08

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SUMMARY OF NRC STAFF'S REVIEW  
OCONEE NUCLEAR STATION, UNIT 2  
2007 STEAM GENERATOR TUBE INSPECTIONS  
DOCKET NO. 50-270

By letter dated August 28, 2007, Agencywide Documents Access and Management System (ADAMS) Accession No. ML072480158, Duke Power Company LLC (Duke), the licensee submitted information summarizing the results of the 2007 steam generator (SG) tube inspections at Oconee Nuclear Station, Unit 2 (Oconee Unit 2). Additional information concerning the 2007 SG tube inspections at Oconee Unit 2 was summarized by the U.S. Nuclear Regulatory Commission (NRC) staff in a letter dated July 17, 2007 ADAMS Accession No. ML071930126.

Oconee Unit 2 is a two-loop pressurized-water reactor with once-through steam generators (OTSGs) manufactured by Babcock & Wilcox (B&W), Canada. The Oconee Unit 2 OTSGs are replacement OTSGs that were installed during the spring 2004 refueling outage. The replacement OTSGs consist of 15,631 thermally treated Alloy 690 tubes that have been hydraulically expanded into the tubesheet to a depth of 13 inches. There are 15 Type 410 stainless steel tube support plates (TSP) of trifoil broach design. However, there are some round drilled openings at the 14<sup>th</sup> TSP. The 2007 inspections at Oconee Unit 2 were the second inservice inspections of the replacement OTSGs.

The first inservice inspection of the replacement OTSGs at Oconee Unit 2 in fall 2005 revealed unexpected, widespread wear degradation of the tubing at TSP locations. Oconee Unit 1 and Oconee Unit 3 have also experienced this widespread tube wear degradation at TSP locations.

The scope of inspection in 2007 was 100 percent of the active tubes in both OTSGs using a combination X-probe/bobbin probe (i.e., 50 percent with an X-probe and the remaining 50 percent with a bobbin probe). Selected indications were further characterized special interest inspections. All of the indications were at TSP locations and were dispositioned as wear flaws. Only one wear indication was found to be greater than the technical specification plugging limit of 40-percent TW. The tube containing this 42-percent TW wear indication was removed from service by plugging. To date, there are a total of six tubes plugged in the 2A OTSG, and five tubes plugged in the 2B OTSG.

The NRC staff will continue to monitor the efforts at Oconee Units 1, 2, and 3 to identify causes of tube wear indications at tube-to-TSP locations and potential corrective actions to mitigate damage progression.

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by the technical specifications. In addition, the NRC staff concludes that there are no technical issues that warrant follow-up action at this time since the inspections appear to be consistent with the objective of detecting potential tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

Principal Contributor: M. Yoder, DCI/CSGB

Date: February 28, 2008

Oconee Nuclear Station, Units 1, 2, and 3  
February 29, 2008

cc:

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