

November 28, 2006

LICENSEE: DUKE POWER COMPANY LLC (DUKE)

FACILITY: OCONEE NUCLEAR STATION, UNIT 3 (Oconee Unit 3)

SUBJECT: SUMMARY OF MAY 9, 2006, CONFERENCE CALL TO DISCUSS THE SPRING 2006 STEAM GENERATOR INSPECTION (TAC NO. MD1492)

On May 9, 2006, the Nuclear Regulatory Commission (NRC) staff participated in a conference call with Duke (the licensee) to discuss the scope, results, and status of the spring 2006 steam generator tube inspections at Oconee Unit 3. The NRC participants were E. Murphy, K. Karwoski, A. Hiser, and R. Chou. The Duke participants were J. Weast, M. Robinson, J. Gilreath, D. Mayes, S. Capps, and P. Downing.

Oconee Unit 3 is a two-loop, pressurized-water reactor with once-through steam generators (OTSGs) manufactured by Babcock & Wilcox, Canada. The Oconee Unit 3 OTSGs are replacement OTSGs installed during the previous refueling outage (fall 2004). The ongoing inspections at Oconee Unit 3 are the first inservice inspections of the replacement OTSGs at this unit.

A major point of interest to the NRC staff going into the call was the state of tube wear at Oconee Unit 3. The first inservice inspection of identical replacement OTSGs at Oconee Unit 1 in the spring of 2005 and Oconee Unit 2 in the fall of 2005, revealed unexpected, widespread wear degradation of the tubing at tube support plate locations.

In advance of the phone call, the licensee provided a written summary of its inspection program, status, and results, to date, which is enclosed. This summary addressed all discussion points that had been requested by the NRC staff prior to the phone call. During the phone call, the licensee walked the NRC staff through the summary material.

The licensee had completed 88 percent of its planned inspections in the 3A OTSG and 82 percent in the 3B OTSG at the time of the phone call. As was observed previously at Oconee Units 1 and 2, widespread wear degradation was observed at the tube support plates (i.e., support plates 8 through 14). For Unit 3, 10.7 percent of the tubes inspected in 3A OTSG and 4.4 percent of the tubes inspected in 3B OTSG contained wear indications. This was somewhat fewer than the percentages found for Unit 1 (11.5 percent in 1A OTSG and 9.3 percent in 1B OTSG), but somewhat more than found for Unit 2 (3.2 percent in 2A OTSG and 4.5 percent in 2B OTSG). The deepest indication found to date at Unit 3 is 26 percent through-wall (TW), compared to the deepest indication of 42 percent TW at Unit 1 and 32 percent TW at Unit 2. Based on the indications found to date, the licensee projects that no tubes will require plugging at Unit 3 to ensure tube integrity throughout the next operating cycle to the next scheduled inspection. At Units 1 and 2, 48 and 3 tubes, respectively, required plugging for this purpose.

Duke

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The licensee met with the NRC staff on April 10, 2006 (ML061100211) to discuss the status of the licensee's ongoing program to identify the contributing causes of the wear degradation at the Oconee units and potential measures to mitigate future wear. This program includes, in part, the installation of accelerometers on the OTSG upper-channel head and steam line and installation of pressure transducers through various inspection port covers at each of the Oconee units to acquire data on excitation sources that may be contributing to the wear problem. During the call on May 9, 2006, the licensee confirmed that this instrumentation package was being installed at Unit 3. During the April 10, 2006 meeting, the licensee stated that it expected to be reaching some conclusions on the major contributing factors toward the end of 2006.

/RA

Leonard N. Olshan, Project Manager  
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Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-287

Enclosure:  
Steam Generator Tube Inspection Discussion  
Points of May 9, 2006

cc w/encl.: See next page

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