

July 26, 2005

LICENSEE: DUKE ENERGY CORPORATION

FACILITY: OCONEE NUCLEAR STATION, UNIT 1, 2, AND 3

SUBJECT: SUBJECT OF JUNE 22, 2005, MEETING TO DISCUSS RESULTS OF SPRING 2005 STEAM GENERATOR INSPECTION AT OCONEE NUCLEAR STATION, UNIT 1 (TAC NO. MC7234)

On June 22, 2005, the Nuclear Regulatory Commission (NRC) met with Duke Energy Corporation (the licensee) to discuss the results of the Spring 2005 steam generator inspection at Oconee Nuclear Station (Oconee), Unit 1. Attachment 1 provides a list of the attendees. Attachment 2 contains the slides presented by the licensee during the meeting.

The steam generators at Oconee, Unit 1 were replaced during the Fall 2003 refueling outage. This was the first replacement of once-through steam generators (i.e., steam generators with straight tubes rather than U-bend tubes).

During the 2005 steam generator tube inspections at Oconee, Unit 1, a significant number of tubes (approximately 3200) were found to have wear indications after only 14 months of operation. None of the wear indications were safety significant; however, given the large number of tubes affected, the licensee and the steam generator fabricator (B&W Canada) began a comprehensive investigation into the cause. The investigation is on-going and no single cause has been identified; however, the consensus of industry experts is that the steam generators are experiencing flow-induced wear. The excitation force for this wear is not known at this time.

The root cause investigation is expected to continue through the end of 2005. Some of the corrective actions being considered include (1) pulling tubes from Oconee, Unit 2 during its Fall 2005 outage (Oconee, Units 2 and 3 have similar replacement steam generators to those used at Oconee, Unit 1), (2) installing additional instrumentation (pressure transducers and accelerometers) on the Oconee, Unit 2 steam generators during the Fall 2005 outage, (3) and performing additional tests and analytical analysis.

The licensee has installed Nitrogen-16 monitors in each of the three units to assist in primary-to-secondary leak detection. In addition, the actions to take upon detection of primary-to-secondary leakage, including a tube rupture event, have been reviewed with the operators.

NRR and Region II continue to follow the licensee's investigations.

Attachments: As stated

cc w/atts: See next page

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LIST OF ATTENDEES

MEETING TO DISCUSS RESULTS OF SPRING 2005 STEAM GENERATOR INSPECTION

AT OCONEE NUCLEAR STATION, UNIT 1

JUNE 22, 2005

NRC

J. Davis  
K. Karwoski  
L. Lund  
M. Mayfield  
T. Mintz  
E. Murphy  
L. Olshan  
S. Vias (by telephone)

DUKE

T. Alley  
S. Capps  
G. Davenport  
J. Davis  
R. Eaker  
D. Mayes  
M. Robinson

OTHER

J. Albert, B&W Canada  
N. Idvorian, B&W Canada  
R. Klarner, B&W Canada  
D. Lee, B&W Canada  
E. Bird, MPR Associates

Oconee Nuclear Station, Units 1, 2, and 3

cc:

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