

From: Mahesh Chawla
To: Joseph.bauer@exeloncorp.com
Date: 3/4/04 4:05PM
Subject: Braidwood Station, Unit 1 Steam Generator Tube Inspection Results

By letters dated May 7, 2003 and July 29, 2003, Exelon Generation Company, the licensee, submitted reports summarizing the steam generator tube inspections performed during the tenth refueling outage (April 2003) at Braidwood Station, Unit 1. The staff has reviewed the information the licensee provided with the submittal.

Based on the review of these documents, the staff has determined that following additional information is required in order to complete the evaluation. Please review these questions and let me know your availability to have a teleconference. Please call me if you have any questions/comments at (301) 415-8371.

1. Various types of tube wear have occurred in Babcock and Wilcox recirculating steam generators including typical wear, localized fan bar wear (theorized to be a result of arch-bar distortion which affects specific columns of tubes), and atypical wear (attributed to asperities on the flat surfaces of the fan bar supports). For the indications of tube wear detected at Braidwood 1 at the fan bar and lattice grids, clarify the type of tube wear that is occurring at these locations.

2. The February 9, 2001 amendment request to extend the operating interval between inspections indicated that several tubes were in contact with other tubes and this condition is expected to naturally correct itself. Discuss the extent to which this condition (i.e., tube-to-tube contact) was monitored during your 2003 inspections. Discuss whether any tubes in contact were identified during the 2003 outage. If tubes in contact were identified, discuss whether the tubes were also in contact prior to placing the SG inservice. Discuss whether all tubes previously determined to be in contact were inspected in 2003. If all tubes known to be in contact were not inspected, discuss the basis for concluding that the structural and leakage integrity of the steam generators will be maintained at these locations until the next inspection.

3. The February 9, 2001 amendment request to extend the operating interval between inspections indicated that no foreign objects were known to be present in the steam generators. For the loose parts that were identified during the 2003 outage, were these locations (i.e., the locations where the loose parts were detected in 2003) inspected (visually) during the inspections in 2000? The inspection results indicate wear on one tube proceeding to 48% through-wall in the course of two operating cycles (or possibly less), therefore, the staff requests a discussion on when these loose parts were introduced into the SG.

4. The steam generators at Braidwood 1 were replaced in 1998. Provide the following general design information: the manufacturer of the tubes, the thickness (axial extent) of the tube supports (fan bars and lattice grid), and the pitch and pattern (e.g., triangular) of the tubes. Also, clarify the rows of tubes which were stress relieved after bending (i.e., what rows have bend radii less than or equal to 12-inches).

CC: Lauren Quinones; Louise Lund

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