



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 20, 2008

Mr. Charles G. Pardee
President and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BRAIDWOOD STATION, UNIT 1 - REVIEW OF FALL 2007 STEAM
GENERATOR TUBE INSERVICE INSPECTION REPORTS (TAC NO. MD7914)

Dear Mr. Pardee:

By letters to the Nuclear Regulatory Commission (NRC) dated January 18 and 22, 2008, as supplemented by letter dated August 13, 2008, Exelon Generation Company, LLC submitted information pertaining to the steam generator tube inspections conducted during the 2007 refueling outage A1R13 at Braidwood Station (Braidwood), Unit 1, in accordance with the plant's technical specifications (TSs).

The NRC staff has completed its review of these reports and concludes that you have provided the information required by Braidwood, Unit 1 TSs, and that no additional follow-up is required at this time. A copy of the NRC staff's evaluation is enclosed.

Sincerely,

A handwritten signature in black ink, appearing to read "Marshall J. David".

Marshall J. David, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. STN 50-456

Enclosure:
Evaluation of Steam Generator Tube Inservice Inspection Reports

cc w/encl: Distribution via ListServ

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/RA/

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ADAMS Accession No.: ML082810020

SE date: October 20, 2008

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
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OFFICE OF NUCLEAR REACTOR REGULATION
EVALUATION OF STEAM GENERATOR TUBE INSERVICE INSPECTION REPORTS
FOR FALL 2007 REFUELING OUTAGE
BRAIDWOOD STATION, UNIT 1
DOCKET NO. 50-456

By letters dated January 18 and 22, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML080180437 and ML080220526, respectively), as supplemented by letter dated August 13, 2008 (ADAMS Accession No. ML082270014), Exelon Generation Company, LLC (the licensee) submitted information pertaining to the steam generator (SG) tube inservice inspection performed at Braidwood Station (Braidwood), Unit 1, during the fall 2007 refueling outage (RFO) 13.

Braidwood, Unit 1 has four replacement SGs designed and fabricated by Babcock and Wilcox International. Each SG has 6,633 thermally-treated, Alloy 690 tubes that have an outside diameter of 0.6875 inches, and a nominal wall thickness of 0.040 inches. The tubes are supported by Type 410 stainless steel, lattice-grid tube supports, and flat fan bars. The tubes were hydraulically-expanded at each end for the full depth of the tubesheet.

The licensee provided the scope, extent, methods, and results of its SG tube inspections in the documents cited above. In addition, the licensee described corrective actions (i.e., tube plugging or repair) taken in response to the inspection findings.

After review of the information provided by the licensee, the Nuclear Regulatory Commission (NRC) staff has the following comments and observations:

- At the time of the 2007 inspections, the replacement SGs had been in service for 86.39 effective full power months (EFPM) of operation in the first sequential period, which is 144 EFPM.
- The licensee performed upper and lower steam drum region inspections, as well as feeding header inspections, in SG 1D during 2007. The licensee also inspected the top lattice grid in SG 1B. No anomalies, such as erosion, wear, cracking, misalignment, or loose parts, were observed during these inspections.
- During the 2007 visual inspections, several locations in the tube bundle region were identified that had loose parts, and some tubes were identified with wear attributed to loose parts. All loose parts were initially detected during visual inspections. Once

Enclosure

identified, the tubes surrounding the loose parts were inspected. When loose parts were not able to be retrieved and were located in regions of high flow, the tubes in the vicinity of the loose part were stabilized and plugged. If the loose part was in a low-flow area and deemed acceptable via an engineering evaluation, the tubes in the vicinity of the loose part were allowed to remain in service.

- All of the tube-to-tube proximity calls identified during RFO A1R12 (2006) were identified during RFO A1R13 (2007). The number of tubes identified as being in close proximity during A1R13 (2007) did not change appreciably from A1R12 (2006). The licensee will continue to monitor this condition in future scheduled SG inspections.

Based on a review of the information provided by the licensee, the NRC staff concludes that the licensee provided the information required by their technical specifications. The SG tube inspections at Braidwood, Unit 1 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. No additional follow-up is required at this time.

Principal Contributor: A. Johnson

Date: October 20, 2008