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

May 11, 2009

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

SUBJECT: BYRON STATION, UNIT NO. 1 - REVIEW OF SPRING 2008 STEAM GENERATOR TUBE INSERVICE INSPECTION REPORT (TAC NO. MD9235)

Dear Mr. Pardee:

By letter dated June 30, 2008 (Agencywide Documents Access and Management System Accession No. ML081830083), Exelon Generation Company, LLC (the licensee) submitted a report related to the steam generator tube inservice inspections for the spring 2008, refueling outage at the Byron Station (Byron), Unit No. 1, in accordance with the plant's technical specifications (TSs).

The Nuclear Regulatory Commission (NRC) staff has completed its review of the report and concludes that you have provided the information required by the Byron TSs, and that no additional follow-up is required at this time. A copy of the NRC staff evaluation is enclosed.

Sincerely,

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

Docket No. STN 50-454

Enclosure:
Evaluation of Steam Generator Tube Inservice Inspection Report

cc w/encl: Distribution via ListServ

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

# OFFICE OF NUCLEAR REACTOR REGULATION

# EVALUATION OF STEAM GENERATOR TUBE INSERVICE INSPECTION REPORT

# FOR SPRING 2008 REFUELING OUTAGE

# BYRON STATION, UNIT NO. 1

# DOCKET NO. 50-454

By letter dated June 30, 2008 (Agencywide Documents Access and Management System Accession No. ML081830083), Exelon Generation Company, LLC (the licensee) submitted information pertaining to the steam generator (SG) tube inservice inspection performed at Byron Station (Byron), Unit No. 1, during the spring 2008 refueling outage (RFO) 15.

Byron 1 has four Babcock & Wilcox SGs. Each SG contains 6,633 thermally-treated Alloy 690 tubes. Each tube has a nominal wall thickness of 0.040 inches. The tubes were hydraulically-expanded at both ends for the full length of the tubesheet and are supported by a number of stainless steel lattice grid structures and fan bars.

The licensee provided the scope, extent, methods, and results of their SG tube inspections in the document referenced above. In addition, the licensee described corrective actions (i.e., tube plugging) taken in response to the inspection findings. The tubes in all four SGs were inspected during this outage.

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

- The Byron 1 SGs are currently in the 144 effective full power month (EFPM) period. At the time of RFO15, the SGs had operated approximately 102 EFPM in the 144 EFPM period.

- The licensee reported that bobbin coil examinations of the U-bend region were performed and revealed fan bar wear. A total of 146 indications in 125 tubes were reported. None of the tubes exceeded the 40 percent through wall repair limit and no tubes were plugged due to fan bar wear. During the last SG inspections in 2005, only 46 indications of fan bar wear in 42 tubes were identified.

- The licensee reported structural limits for various forms of degradation. The NRC staff did not review these limits in detail; however, the limits appear reasonable.

ENCLOSURE

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by the plant's technical specifications. In addition, the NRC staff concludes that there are no technical issues that warrant follow-up action at this time, because 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: A. Obodoako

Date: May 11, 2009

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Exelon Generation Company, LLC
4300 Winfield Road
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***/RA/***

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

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Evaluation of Steam Generator Tube Inservice Inspection Report

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