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

April 20, 2011

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON NUCLEAR POWER STATION, UNIT 2 - REVIEW OF SPRING 2010 STEAM GENERATOR TUBE INSERVICE INSPECTION REPORT (TAC NO. ME4682)

Dear Mr. Pacilio:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated July 23, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102100454), Exelon Generation Company, LLC (the licensee), submitted information pertaining to the 2010 steam generator tube inspections at Byron Nuclear Power Station, Unit 2 (Byron, Unit 2), in accordance with the station's technical specifications (TSs). This was the 15th refueling outage for Byron, Unit 2.

The NRC staff has completed its review of the report and concludes that the licensee has provided the information required by the station's TSs, and that no additional follow-up is required at this time. A copy of the NRC staff's evaluation is enclosed.

Sincerely,

Michael Mahoney FOR

Nicholas J. DiFrancesco, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. STN 50-455

Enclosure:
Review of Spring 2010 Steam Generator Tube
Inservice Inspections

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OFFICE OF NUCLEAR REACTOR REGULATION

REVIEW OF SPRING 2010 STEAM GENERATOR TUBE

INSERVICE INSPECTIONS

BYRON NUCLEAR POWER STATION, UNIT 2

DOCKET NO. 50-455

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated July 23, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102100454), Exelon Generation Company, LLC (the licensee) submitted information summarizing the results of the 2010 steam generator (SG) tube inservice inspections at Byron Nuclear Power Station, Unit 2 (Byron, Unit 2), during the 15th refueling outage (RFO).

Byron, Unit 2, has four Westinghouse Model D-5 SGs. There are 4570 thermally treated Alloy 600 tubes in each SG, with a nominal outside diameter of 0.750 inches and a nominal wall thickness of 0.043 inches. The tubes are hydraulically expanded for the full depth of the tubesheet at each end and are welded to the tubesheet at the bottom of each expansion. The tubes are supported by a number of Type 405 stainless steel supports with quatrefoil shaped holes.

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, such as tube plugging, taken in response to the inspection findings. The tubes in all four SGs were inspected this outage.

No crack-like indications were detected during the 2010 inspections.

After reviewing the information provided by the licensee, the NRC staff has the following comments/observations:

1. One tube in SG B (row 7, column 7) was found with loose part damage and was preventively plugged and stabilized because the loose part was in an inaccessible location. An analysis performed by the licensee on the loose part indicated that if the loose part moved, potential wear on in-service tubes would be below the structural limit. Three of the eight tubes surrounding the tube in row 7, column 7, had been plugged previously.

2. During visual inspection of the pre-heater in SG C, four pieces of gasket material were found and removed. Concurrently, the flexitallic gasket for the Byron, Unit 2, startup feedwater strainer was found unwound in the piping, downstream of where it is normally installed. As a result, the pre-heaters in SGs A, B, and D were also visually inspected and two small pieces of gasket material were found and removed in the pre-heater of SG A. The pre-heaters of SGs B and D contained no gasket material.

ENCLOSURE

The scope expansion of pre-heater inspections in SGs A, B, and D, delayed inspection of the steam drums in SGs A and B until the next refueling outage, RFO 16. Erosion of primary moisture separator components had been observed in RFO 13.

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. In addition, the NRC staff concludes that there are no technical issues that warrant follow-up action at this time, since the inspections appear to be consistent with the objective of detecting potential degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

Principal Contributor: A. Johnson

Date of issuance: April 20, 2011

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Sincerely,

/RA by M. Mahoney for/
Nicholas J. DiFrancesco, Project Manager
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