December 20, 2012

MEMORANDUM TO: Michael Dudek, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: Gloria J. Kulesa, Chief ***/RA/***
Steam Generator Tube Integrity and
Chemical Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: BYRON NUCLEAR POWER STATION UNIT 1 – REVIEW OF THE SPRING 2011 STEAM GENERATOR TUBE INSERVICE INSPECTIONS DURING REFUELING OUTAGE 17
(TAC No. ME9452)

By letter dated July 14, 2011 (Agencywide Documents Access Management System (ADAMS) Accession No. ML11200A302), Exelon Generation Company, LLC, the licensee, submitted information summarizing the results of their 2011 steam generator (SG) tube inspections performed during refueling outage 17 at Byron Nuclear Power Station, Unit 1 (Byron 1).

The staff of the Steam Generator Tube Integrity and Chemical Engineering Branch of the Division of Engineering has completed its review of the report and concludes that the licensee provided the information required by the Byron 1 Technical Specifications. No additional follow up is required at this time. The staff's review is enclosed.

When you forward the review summary to the licensee, please include Kenneth J. Karwoski and me on distribution for the final document. If you elect to significantly change the enclosed summary prior to sending it to the licensee, please include me on concurrence.

Docket No.: 50-454

Enclosure:
Review of Inspection Summary Report

CONTACT: Aloysius O. Obodoako, NRR/DE/ESGB
(301) 415-1502

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ADAMS Accession Number: ML12335A216

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DATE	12 /03 /2012	12 /04 /2012	12 /20 /2012

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BYRON NUCLEAR POWER STATION UNIT 1
SUMMARY OF THE STAFF'S REVIEW OF THE STEAM GENERATOR TUBE INSERVICE INSPECTIONS FOR REFUELING OUTAGE 17
TAC No. ME9452
DOCKET No. 50-454

By letter dated July 14, 2011 (Agencywide Documents Access Management System (ADAMS) Accession No. ML11200A302), Exelon Generation Company, LLC, the licensee, submitted information summarizing the results of their 2011 steam generator (SG) tube inspections performed during refueling outage 17 at Byron Nuclear Power Station, Unit 1 (Byron 1).

Byron Nuclear Power Station, Unit 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 this outage.

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

- The licensee reported that during the steam drum inspection, erosion was found in the steam nozzle venturi area. The localized degradation was observed in the material surrounding the venturi, adjacent to the retaining plate. The licensee stated that it contacted the original equipment manufacturer regarding this degradation and concluded to accept the condition "as-is" and that there are no further actions required. The licensee based their conclusion on the fact that the venturies are held into the head primarily by an interface fit between the venturi and steam nozzle, the retaining plate only provides a secondary retaining function, and localized degradation of the base material will in no way affect the function of the venturies or increase the risk of the venturies loosening during operation.

Based on a review of the information provided, the staff concludes that the licensee provided the information required by the Byron, Unit 1 Technical Specifications. In addition, the 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 tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

ENCLOSURE