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U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Byron Station, Unit 2  
Facility Operating License No. NPF-66  
NRC Docket No. 50-455

Subject: Response to Request for Additional Information Regarding the Byron Station,  
Unit 2 Fall 2005 Steam Generator Inspection

- References:
- (1) Letter from S. E. Kuczynski (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 2 Steam Generator Inservice Inspection Summary Report," dated January 3, 2006 (ML060050336)
  - (2) Letter from D.M. Hoots (Exelon Generation Company, LLC) to U. S. NRC, "Response to Request for Additional Information Regarding the Byron Station, Unit 2 Fall 2005 Steam Generator Inspection," dated September 8, 2006 (ML062560349)
  - (3) E-mail from R. F. Kuntz (U. S. NRC) to D. J. Chrzanowski (Exelon Generation Company, LLC), "Byron Unit 2 Cycle 12 RFO SG Tube ISI Review," dated October 10, 2006

Based on the review of the Reference 1 and Reference 2 submittals, the NRC determined that additional information was required in order to complete their evaluation of the Byron Station Unit 2 Fall 2005 steam generator inspection report. The NRC requested a response to two questions contained in the Reference 3 correspondence. The attachment to this letter provides the Exelon Generation Company, LLC response to these NRC questions.

Should you have any questions concerning this letter, please contact W. Grundmann, Regulatory Assurance Manager, at (815) 406-2800.

Respectfully,



David M. Hoots  
Site Vice President  
Byron Nuclear Generating Station

DMH/JRS/TLH/rah

Attachment

**Attachment**

**Byron Station, Unit 2**

**Docket Number STN 50-455  
License Number NPF-66**

**Additional Information Regarding the Byron Station Unit 2  
Fall 2005 Steam Generator Inspection**

## Attachment

### Additional Information Regarding the Byron Station Unit 2 Fall 2005 Steam Generator Inspection

#### Question 1

*The following is in regarding to the visual inspection of the secondary side steam drum and moisture separator region for SG 2B. Exelon indicated that Westinghouse performed assessments and determined that the as-found condition of the primary separator assemblies is acceptable for continued operation for the next operating cycle. The staff would like to know the following information regarding the next Byron Unit 2 SG tube ISI inspection: (1) what actions, if any, does the licensee plan to take during the next RFO regarding the primary separator assemblies for SG 2B and (2) does the licensee plan to perform secondary side steam drum and moisture separator region inspections for the other SGs to assess the condition of the primary separator assemblies.*

#### Response:

During the next Byron Unit 2 refueling outage, visual inspection of the secondary side steam drum and moisture separator region is currently planned for each of the four steam generators. The intent of the inspections is to re-assess the condition of the 2B steam generator and to assess the condition of the other three steam generators. The next Byron Unit 2 refueling is planned to occur in Spring 2007.

#### Question 2

*Given that Byron Unit 1 has similar SGs, the staff would like to know if Exelon plans to perform secondary side steam drum and moisture separator region inspections in the Unit 1 SGs during the Fall 2006 outage.*

#### Response:

Byron Unit 1 contains Babcock & Wilcox replacement steam generators. The design and materials of the replacement steam generators are different than the Unit 2 Westinghouse Model D-5 steam generators. The Unit 1 steam generator steam drum and moisture separator materials contain higher quantities of chromium than the Unit 2 materials, thereby reducing the susceptibility to degradation and erosion. Additionally, the operating life of the Unit 1 steam generators is considerably less than the Unit 2 steam generators. The Unit 1 steam generators were replaced in 1998, while the Unit 2 steam generators went into operation in 1987.

A steam drum and moisture separator inspection in the 1C steam generator was performed during the prior Byron Unit 1 Cycle 13 refueling outage (Spring 2005) and no degraded conditions were found. There were no steam drum or moisture separator inspections performed during the Byron Cycle 14 refueling outage (Fall 2006). The Unit 1 steam drum and moisture separators are on a visual inspection monitoring program currently planned for every fourth refueling outage and assessed during degradation assessment evaluations prior to every refueling outage.