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10 CFR 50.90

RS-07-038

March 7, 2007

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

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. 50-456 and 50-457

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. 50-454 and 50-455

Subject: Additional Information Supporting Application for Steam Generator Tube Integrity Technical Specification Improvement

References:
(1) Letter from J. A. Bauer (Exelon Generation Company, LLC) to U. S. NRC, "Application for Technical Specification Improvement Regarding Steam Generator Tube Integrity," dated November 18, 2005

(2) Letter from D. Benyak (Exelon Generation Company, LLC) to U. S. NRC, "Supplement to Response to Request for Additional Information Regarding Application for Steam Generator Tube Integrity Technical Specification," dated February 23, 2007

In Reference 1, Exelon Generation Company, LLC (EGC) requested an amendment to Appendix A Technical Specifications (TS), of Facility Operating License Nos. NPF-72, NPF-77, NPF-37, and NPF-66 for Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, respectively. The proposed changes were to revise the TS requirements related to steam generator tube integrity. The change was consistent with NRC approved Revision 4 to Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-449, "Steam Generator Tube Integrity."

In Reference 2, EGC provided additional information that was required by the NRC to complete their review of the Reference 1 application. During a conference call on March 1, 2007, EGC's response to NRC Questions 1 and 2, which was provided in Reference 2, was discussed. Specifically, the NRC questioned the impact of variations

in the thermal expansion coefficient (TEC) for the tubesheet collar specimens used in tests conducted by Westinghouse Electric Company, LLC (Westinghouse).

Subsequent to the March 1, 2007, conference call, Westinghouse performed a study on the possible variability of the TEC, and the effect it may have on the H*/B* criteria. The results show that for the worst-case condition of a steam generator cold leg with a non-functional divider plate and a low TEC (i.e., divider plate factor = 1.00, TEC = 6.9 μin/in °F), the maximum H*/B* depth is 12.6 inches when only the effect of the TEC on residual mechanical holding capacity of the joint is considered. An H* depth of 12.6 inches is a 1.10 inch increase in the limiting cold leg steam line break case over the previously reported results using the nominal TEC value and a non-functional divider plate. This shows that worst-case TEC does not dramatically impact the H* distance and does not significantly impinge on the available margin for the requested 17 inch inspection depth. Based on a preliminary analysis, if the lower TEC value were used in the finite element analysis to determine the radial displacement of the tubesheet, the reduced radial deflection will offset the above effect on holding capacity of the joint and no change in the H* depth would result.

The information provided in this letter supplements the supporting analysis for the original license amendment request as described in Reference 1. The conclusions of the No Significant Hazards Consideration and the Environmental Consideration provided in Attachment 1 of the Reference 1 letter are not affected by this additional information.

In accordance with 10 CFR 50.91(b), "State consultation," EGC is providing the State of Illinois with a copy of this letter and its attachments to the designated State Official.

EGC requests that this proposed license amendment change be approved by April 2, 2007, to support the inspection activities for Byron Unit 2, Refueling Outage 13. If you have any questions about this letter, please contact Mr. Kenneth M. Nicely at (630) 657-2803.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 7th day of March 2007.

Respectfully,

Darin Benyak

Darin Benyak
Manager – Licensing