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U.S. Nuclear Regulatory Commission  
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Washington, DC 20555-0001

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

Subject:      Regulatory Commitment Change Summary Report

Please find enclosed the Regulatory Commitment Change Summary Report for Braidwood Station.

This report contains summary information for regulatory commitment changes from January 1, 2003 through December 31, 2003.

If you have any questions regarding this report, please contact Ms. Kelly Root, Regulatory Assurance Manager, at (815) 417-2800.

Respectfully,



Thomas P. Joyce  
Site Vice President  
Braidwood Station

Attachment

cc:      Regional Administrator – NRC Region III  
         NRC Senior Resident Inspector – Braidwood Station

A001

**Attachment  
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Regulatory Commitment Change Summary Report**

**Originating Document:**

ComEd (currently known as Exelon Generation Company) response to Nuclear Regulatory Commission (NRC) Generic Letter (GL) 89-13, "Service Water System Problems Affecting Safety-Related Equipment," dated January 29, 1990.

**Subject of Change:**

Revise the commitment associated with the frequency of performing heat exchanger testing and inspections.

**Original Commitment:**

In response to Item II of GL 89-13, ComEd committed to trending heat exchanger performance so that the optimal testing frequency could be determined (not less than once per five years for each heat exchanger).

**Revised Commitment:**

The revised commitment will allow a 25% frequency extension associated with the frequency of performing heat exchanger testing and inspections. The optimal testing or inspection interval will not be less than once every five years (subject to a 25% frequency extension allowance) for each heat exchanger.

All other commitments contained in the GL response will remain unchanged.

**Basis:**

GL 89-13 requests that licensees perform the recommended actions or equally effective actions to ensure that their service water systems are in compliance and will be maintained in compliance with 10 CFR Part 50, Appendix A, General Design Criteria 44, 45, and 46 and Appendix B, Section XI. In particular, Item II of GL 89-13 requires implementing a continuing program for periodic retesting of safety-related heat exchangers cooled by service water in open-cycle systems. The GL indicates that the initial frequency of testing should be at least once each fuel cycle, but after three tests, licensees and applicants should determine the best frequency for testing to provide assurance that the equipment will perform the intended safety functions during the intervals between tests and meet the requirements of GDC 44, 45, and 46. The GL indicates that the minimal final testing frequency should be once every 5 years.

The 25% frequency extension allowance will facilitate surveillance scheduling, as it permits consideration of unit operating conditions that may not be suitable for conducting the surveillance (e.g., transient conditions or other ongoing surveillance or maintenance activities). The 25% extension does not significantly degrade the reliability that results from performing the test at its specified frequency. This is based on the recognition that the predefined intervals are conservative and the most probable result of the test is conformance with the acceptance criteria. The results of the previous three consecutive test/inspections of those heat exchangers with existing intervals potentially greater than 5 years with the 25% extension applied have been reviewed and exhibit satisfactory performance and trends. After each

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test/inspection, the predefined frequencies are evaluated for adequacy and adjusted as appropriate as required. This programmatic requirement ensures that each future case of an interval, up to and including 5 years, is reviewed and evaluated by considering the results of past performance test/inspections prior to approval.

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**Originating Document:**

ComEd response to NRC GL 97-05, "Steam Generator Tube Inspection Techniques," dated February 27, 1998.

**Subject of Change:**

Revise the commitment related to qualified sizing inspection techniques used to determine whether tubes with degradation are allowed to remain in service.

**Original Commitment:**

In response to Item (1) of GL 97-05, ComEd provided the following information:

ComEd's practice is to allow steam generator (SG) tubes with indication to remain in service based on sizing which is qualified per EPRI PWR Steam Generator Guidelines, Revision 4, Volume 1, June 1996. Indications left in service based upon sizing result from 1) wear and 2) Outside Diameter Stress Corrosion Cracking (ODSCC) at the tube support plates. Tube support plate ODSCC indications are left in service by application of a voltage based Interim Plugging Criteria in accordance with plant Technical Specifications and GL 95-05, "Voltage-Based Repair Criteria for Westinghouse Steam Generator Tubes Affected by Outside Diameter Stress Corrosion Cracking." No other tubes with indications of degradation are sized and left in service at Byron or Braidwood.

In response to Item (2) of GL 97-05, ComEd provided the following information:

ComEd's practice is to follow the requirements of the Electric Power Research Institute (EPRI) Pressurized Water Reactor (PWR) Steam Generator Guidelines (i.e., Revision 4, Volume 1, June 1996 and Revision 5, Volume 1, September 1997). The guidelines provide guidance on the qualifications of SG tubing examination techniques and equipment to detect and size flaws. These guidelines were transmitted to the NRC by the Nuclear Energy Institute (NEI). ComEd has been following the requirements for sizing degradation using EPRI PWR Steam Generator Guidelines, Revision 4, Volume 1, June 1996. During the Byron Unit 2 outage beginning in April 1998, ComEd will implement the requirements of the EPRI PWR Steam Generator Guidelines, Revision 5, Volume 1, September 1997.

As part of the EPRI Appendix H process, test samples are used to qualify detection and sizing capabilities. While the pulled tube samples are preferred, fabricated samples may be used. If fabricated samples are used, the samples are verified to produce signals similar to those being observed in the field in terms of signal characteristics, signal amplitude, and signal-to-noise ratio. The procedures developed in accordance with Appendix H specify essential variables for each procedure. These essential variables are associated with the individual instrument, probe, cable, or particular on-site equipment configurations.

The eddy current Level III qualified individual reviews the Appendix H qualified techniques to assure the qualified techniques are applicable to site-specific conditions.

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**Revised Commitment:**

The revised commitment will allow SG tubes with indications of wear to be left in service based on sizing techniques which are qualified in accordance with the currently approved version of the EPRI PWR Steam Generator Examination Guidelines. This includes mechanical wear associated with support structures, i.e., anti-vibration bars, lattice grids, and tube support plates. Since that time EPRI Appendix H qualified techniques have been developed to size tube wear associated with secondary side foreign objects.

Note that Interim Plugging Criteria allowing ODSCC to remain in service is no longer applicable to Braidwood Unit 1 as a result of SG replacement and has never been approved for use in Braidwood Unit 2.

**Basis:**

GL 97-05 was issued to emphasize the importance of performing SG tube inspections using qualified techniques in accordance with the requirements of Appendix B to 10 CFR 50. The revised commitment wording is consistent with the original commitment wording in that it refers to using only EPRI Appendix H qualified inspection techniques to size indications of wear that will be evaluated for continued service. Use of EPRI Appendix H qualified inspection techniques to allow indication of foreign object wear to be sized and evaluated for continued service is routinely performed throughout the industry. The industry has stated that it will follow the requirements of NEI 97-06, "Steam Generator Program Guidelines." The NEI 97-06 guidelines require implementation of the latest version of the EPRI PWR Steam Generator Examination Guidelines, which include EPRI Appendix H technique qualification.