

November 14, 2007  
BW070096

CAL No. NRR-07-008

Mr. J. E. Dyer, Director  
Office of Nuclear Reactor Regulation  
ATTN: Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Braidwood Station, Unit 1  
Facility Operating License No. NPF-72  
NRC Docket No. STN 50-456

Subject: Closeout of Confirmatory Action Letter Requirements – Braidwood Station Unit 1  
(TAC NO. MD4134)

- References: (1) Letter from T. S. O'Neill (Exelon Generation Company, LLC) to U. S. NRC, "Supplemental Response Regarding Inspection and Mitigation of Alloy 600/82/182 Pressurizer Butt Welds," dated February 21, 2007
- (2) Letter from J. E. Dyer (U. S. NRC) to C. M. Crane (Exelon Generation Company, LLC), "Confirmatory Action Letter – Braidwood Station, Units 1 and 2 (TAC Nos. MD4134 and MD4135)," dated March 22, 2007

Dear Mr. Dyer:

The purpose of this letter is to notify you that the actions and commitments identified in the Reference 1 submittal and confirmed in the Reference 2 Confirmatory Action Letter (CAL No. NRR-07-008) have been completed for Braidwood Station Unit 1. The commitments involved: schedule for mitigation actions, enhanced Reactor Coolant System leakage monitoring, and inspection reporting requirements. All commitments were related to Alloy 82/182 pressurizer connection activities.

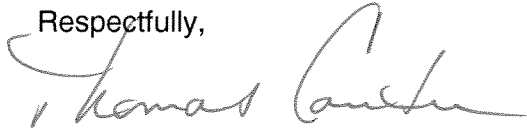
The details of the commitments and a summation of the closeout activities for Braidwood Station Unit 1 are provided in the attachment to this letter.

U. S. Nuclear Regulatory Commission  
Page 2  
November 14, 2007

This submittal does not contain any additional Regulatory Commitments.

Should you have any questions concerning this letter, please contact Mr. David Gullott,  
Regulatory Assurance Manager, at (815) 417-2800.

Respectfully,

A handwritten signature in cursive script, appearing to read "Thomas Coutu".

Thomas Coutu  
Braidwood Station  
Site Vice President

Attachment: Braidwood Station Unit 1 Confirmatory Action Letter Closeout - CAL No.  
NRR 07-008

**Braidwood Station Unit 1  
Confirmatory Action Letter Closeout  
CAL No. NRR 07-008**

COMMITMENT	COMPLETION DETAILS
<p>Exelon Generation Company, LLC (EGC) will complete mitigation activities on the pressurizer surge, spray, safety, and relief nozzle butt welds and safe end butt welds containing Alloy 82/182 material prior to December 31, 2007 for Braidwood Station Unit 1.</p>	<p>Full structural weld overlays, with primary water stress corrosion cracking resistant material, were installed on Braidwood Station Unit 1 pressurizer surge, spray, safety, and relief nozzle-to-safe end butt welds containing Alloy 82/182 material. The overlays were completed in the Fall 2007 refueling outage (A1R13).</p>
<p>The pressurizer surge, spray, safety, and relief nozzle butt welds and safe end butt welds containing Alloy 82/182 material will be inspected within every 4 years, until mitigated.</p>	<p>Mitigation activities were completed for Braidwood Station Unit 1 during the A1R13 refueling outage.</p>
<p>Braidwood Station Unit 1 will adopt enhanced unidentified leakage monitoring requirements. These unidentified reactor coolant system (RCS) leakage monitoring enhancements include: Daily measurement of unidentified RCS leakage</p> <p>Incorporation of two new action levels for the following unidentified RCS leakage scenarios:</p> <ul style="list-style-type: none"> <li>• a <math>\geq 0.10</math> gpm change from one day to the next, sustained for 72 hours with at least 0.10 gpm not confirmed from sources other than pressurizer nozzle welds.</li> <li>• a <math>\geq 0.25</math> gpm above a baseline sustained for 72 hours with at least 0.25 gpm not confirmed from sources other than the pressurizer nozzle welds</li> <li>• Once the 72 hour evaluation period, i.e. the 72 hour period of sustained increased leakage, is complete, and the leakrate is still elevated, Braidwood Station Unit 1 or Unit 2, as applicable, will be placed in MODE 3 within 6 hours and in MODE 5 within 36 additional hours and a bare metal visual inspection of unmitigated Alloy 82/182 pressurizer nozzles will be performed.</li> </ul>	<p>Braidwood Station Unit 1 adopted the enhanced unidentified leakage monitoring requirements starting on February 28, 2007. From that time until Unit 1 shutdown for the A1R13 refueling outage on October 1, 2007, there were no instances of sustained elevated leakage that required a Unit 1 shutdown.</p> <p>After restart from refueling outage A1R13,<sup>1</sup> and the mitigation, as described above, completed, Braidwood Station Unit 1 reverted back to the standard Technical Specification required RCS leakage monitoring requirements.</p>

<sup>1</sup> The return to service date from A1R13 was October 26, 2007.

**Braidwood Station Unit 1  
Confirmatory Action Letter Closeout  
CAL No. NRR 07-008**

COMMITMENT	COMPLETION DETAILS
<p>Reports of any Alloy 82/182 pressurizer nozzle connections inspection results for Braidwood Station Unit 1 will be submitted to the NRC within 60 days of the completion date of the inspection. This includes reports of any bare metal visual inspections as a result of increased RCS leak rate, and reports of any corrective or mitigative actions taken on the pressurizer surge, spray, safety, or relief nozzle butt welds and safe end butt welds containing Alloy 82/182 material.</p>	<p>Since the initiation of this commitment on February 28, 2007 until the shutdown of Braidwood Station Unit 1 on October 1, 2007, there were no bare metal visual examinations performed as a result of RCS leakage.</p> <p>In accordance with the requirements of Bulletin 2004-01, "Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors," Braidwood Station Unit 1 performed bare metal visual examinations of the pressurizer steam space connections. There were no indications of pressurizer pressure boundary leakage at any of the connections.</p> <p>In addition, as part of the installation of full structural overlays on the pressurizer connections during the Fall 2007 refueling outage at Braidwood Station Unit 1, dye penetrant examinations of all Alloy 82/182 pressurizer connections were performed. There were no indications associated with primary water stress corrosion cracking (PWSCC).</p> <p>Finally, all six Braidwood Station Unit 1 pressurizer connections weld overlays were volumetrically examined in accordance with the requirements of the Reference 3 relief request. The results of these examinations were provided to the NRC in the Reference 4 submittal.</p>

**Braidwood Station Unit 1  
Confirmatory Action Letter Closeout  
CAL No. NRR 07-008**

References:

- (1) Letter from T. S. O'Neill (Exelon Generation Company, LLC) to U. S. NRC, "Supplemental Response Regarding Inspection and Mitigation of Alloy 600/82/182 Pressurizer Butt Welds," dated February 21, 2007
- (2) Letter from J. E. Dyer (U. S. NRC) to C. M. Crane (Exelon Generation Company, LLC), "Confirmatory Action Letter – Braidwood Station, Units 1 and 2 (TAC Nos. MD4134 and MD4135)," dated March 22, 2007
- (3) Letter from T. Coutu (Exelon Generation Company, LLC) to U. S. NRC, "Second 10-Year Inservice Inspection Interval, Relief Request I2R-48, Structural Weld Overlays on Pressurizer Spray, Relief, Safety and Surge Nozzles and Associated Alternative Repair Techniques," dated February 23, 2007
- (4) Letter from T. Coutu (Exelon Generation Company, LLC) to U. S. NRC, "Pressurizer Weld Overlay Examination Results Related to Braidwood Station Relief Request I2R-48," dated November 1, 2007