

Exelon Generation Company, LLC  
Byron Station  
4450 North German Church Road  
Byron, IL 61010-9794

www.exeloncorp.com

Nuclear

CAL No. NRR-07-012

June 4, 2007

LTR: BYRON 2007-0067  
File: 1.10.0101

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

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

Subject: Closeout of Confirmatory Action Letter Requirements – Byron Station Unit 2  
(TAC NO. MD4137)

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 – Byron Station, Unit 2 (TAC NO.  
MD4137)," 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-07-012) have been completed for Byron Station Unit 2. The commitments involved: schedule for mitigation actions, enhanced Reactor Coolant System leakage monitoring, and inspection reporting requirements. All commitments were related to Byron Station Unit 2 Alloy 82/182 pressurizer connection activities.


The details of the commitments and a summation of the closeout activities are provided in the attachment to this letter.

This submittal does not contain any additional Regulatory Commitments.

U. S. Nuclear Regulatory Commission  
Page 2  
June 1, 2007

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

Respectfully,

A handwritten signature in black ink, appearing to read "David M. Hoots", written in a cursive style.

David M. Hoots  
Byron Station  
Site Vice President

Attachment: Byron Station Unit 2 Confirmatory Action Letter Closeout - CAL No. NRR 07-012

**Byron Station Unit 2  
Confirmatory Action Letter Closeout  
CAL No. NRR 07-012**

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 [For Byron Station Unit 2] by December 31, 2007.</p>	<p>Full structural weld overlays, with primary water stress corrosion cracking resistant material, were installed on Byron Station Unit 2 pressurizer surge, spray, safety, and relief nozzle butt welds and safe end butt welds containing Alloy 82/182 material. The overlays were completed in the Spring 2007 refueling outage (B2R13).</p>
<p>Byron Station Unit 2 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> </ul> <p>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</p> <p>Once the 72 hour evaluation period, i.e. the 72 hour period of sustained increased leakage, is complete, and the leakrate is still elevated, Byron Station Unit 2 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.</p>	<p>Byron Station Unit 2 adopted the enhanced unidentified leakage monitoring requirements starting on February 28, 2007. From that time until Unit 2 shutdown for the B2R13 refueling outage on April 1, 2007, there were no instances of sustained elevated leakage that required a Unit 2 shutdown.</p> <p>After restart from refueling outage B2R13,<sup>1</sup> and the mitigation, as described above, completed, Byron Station Unit 2 reverted back to the standard Technical Specification required RCS leakage monitoring requirements.</p>

<sup>1</sup> The return to service date from B2R13 was May 3, 2007.

**Byron Station Unit 2  
Confirmatory Action Letter Closeout  
CAL No. NRR 07-012**

COMMITMENT	COMPLETION DETAILS
<p>Reports of any Alloy 82/182 pressurizer nozzle connections inspection results for Byron Station Unit 2 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 Byron station Unit 2 on April 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," Byron Station Unit 2 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 Spring 2007 refueling outage at Byron Station Unit 2, dye penetrant examinations of all Alloy 82/182 pressurizer connections were performed. There were no indications.</p> <p>Finally, all six Byron Station Unit 2 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>

**Byron Station Unit 2  
Confirmatory Action Letter Closeout  
CAL No. NRR 07-012**

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 – Byron Station, Unit 2 (TAC NO. MD4137)," dated March 22, 2007
- (3) Letter from D. M. Hoots (Exelon Generation Company, LLC) to U. S. NRC, "Third 10-Year Inservice Inspection Interval, Relief Request I3R-08, Preventive Weld Overlays on Pressurizer Spray, Relief, Safety and Surge Nozzles and Associated Alternative Repair Techniques," dated April 28, 2006
- (4) Letter from D. M. Hoots (Exelon Generation Company, LLC) to U. S. NRC, "Pressurizer Weld Overlay Examination Results Related to Byron Station Relief Request 13R-08," dated May 4, 2007