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U. S. Nuclear Regulatory Commission
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Braidwood Station, Unit 2
Facility Operating License No. NPF-77
NRC Docket No. STN 50-457

Subject: Braidwood Station Unit 2 60-Day Response to the Reporting Requirements of NRC Order EA-03-009, "Issuance of First Revised Order Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors"

Reference:
1) Letter from U. S. NRC, "Issuance of First Revised Order Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors," dated February 20, 2004.

2) Letter from K. R. Jury to U. S. NRC, "Answer to First Revised NRC Order (EA-03-009) to Modify Licenses Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads," dated March 9, 2004.

The purpose of this letter is to provide the Braidwood Station Unit 2 60-day response to the reporting requirements listed in Section IV, paragraph E of Reference 1. Braidwood Station, as part of the Exelon Generation Company, LLC, consented to Order EA-03-009 (Order) in Reference 2. The results of the visual inspections required by Section IV, paragraphs C.(3) and D of the Order are provided in the attachment to this letter. These inspections were performed during the recent Braidwood Station Unit 2 Fall 2006 refueling outage (A2R12), which concluded on November 2, 2006. The inspection results are required to be submitted by January 2, 2007.

Please direct any questions you may have regarding this submittal to Mr. Dale Ambler, Regulatory Assurance Manager, at (815) 417-2800.

Sincerely,

Thomas Coutu
Site Vice President
Braidwood Station

Attachment: Results of the A2R12 (Fall 2006) Visual Inspections of the Braidwood Station Unit 2 Reactor Vessel Head

Attachment

Results of the A2R12 (Fall 2006) Visual Inspections of the
Braidwood Station Unit 2 Reactor Vessel Head

The required examinations performed on the Braidwood Unit 2 reactor pressure vessel (RPV) head during the Fall 2006 refueling outage are described in the first revised NRC Order EA-03-009 (Order), Section IV, paragraphs C.(3) and D and are summarized below.

Section IV, paragraph C.(3) states in part:

> ***For those plants in the Low category, RPV head and head penetration nozzle inspections shall be performed as follows. An inspection meeting the requirements of IV.C.(5)(a) must be completed at least every third refueling outage or every 5 years, whichever occurs first.***

Section IV, paragraph C.(5)(a) states:

> ***Bare metal visual examination of 100 percent of the RPV head surface (including 360° around each RPV head penetration nozzle). For RPV heads with the surface obscured by support structure interferences which are located at RPV head elevations downslope from the outermost RPV head penetration, a bare metal visual inspection of no less than 95 percent of the RPV head surface may be performed provided the examination shall include all those areas of the RPV head upslope and downslope from the support structure interference to identify any evidence of boron or corrosive product. Should any evidence of boron or corrosive product be identified, the licensee shall examine the RPV head surface under the support structure to ensure that the RPV head is not degraded.***

Section IV, paragraph D states:

> ***During each refueling outage, visual inspections shall be performed to identify potential boric acid leaks from pressure-retaining components above the RPV head. For any plant with boron deposits on the surface of the RPV head or related insulation, discovered either during the inspections required by this Order or otherwise and regardless of the source of the deposit, before returning the plant to operation the Licensee shall perform inspections of the affected RPV head surface and penetrations appropriate to the conditions found to verify the integrity of the affected area and penetrations.***

Note that the PWSCC susceptibility category for Braidwood Station Unit 2 is Low as defined in Section IV paragraph B of the Order (plants with a calculated EDY less than 8 AND no previous inspection findings requiring classification as High).

VISUAL EXAMINATION RESULTS

During the Braidwood Station Unit 2 Fall 2006 refueling outage (A2R12), an initial walk down was performed with the unit in Mode 3 shortly after reactor shutdown to satisfy the requirements of Section IV paragraph D. The walk down was performed in accordance with the requirements of the Order and the Braidwood Station Boric Acid Corrosion

Control program. During this walk down, no evidence of boric acid leakage was observed. No boric acid was found on the mirror insulation below the nozzles. No new physical deposits were noted.

After the reactor head was removed and set on the stand, a remote bare metal visual inspection of the RPV head was performed to satisfy the requirements of Section IV paragraph C.(5)(a). The inspection was performed in accordance with Exelon procedures ER-AP-335-1012, *"Bare Metal Visual Examination of PWR Vessel Penetrations and Nozzle Safe Ends"* and ER-AA-335-015, *"VT-2 Visual Examination"*. The inspection was performed by a certified VT-2 examiner using a combination of crawler-mounted and pole-mounted cameras connected to a video recorder/monitor that provided the examiner with immediate access to the examination surfaces. The remote equipment used was capable of resolving a 1/32" line on an 18% neutral gray card, which is specified in the 1989 Edition of ASME Section XI, as well as the characters on the IWA-2210-1 chart applicable to later Editions of the Code. Resolution was verified at distances between 18" and 24", but actual examinations were performed with the camera at much closer distances, giving extremely close views of the nozzle-to-interface region and ensuring any boric acid leakage would be easily identified.

There was no evidence of active boric acid leakage or any degradation on the RPV surfaces. Historical staining on the stainless steel penetration tube and minor debris were noted at some penetrations.

The nonvisual examinations required under the Order were previously completed during the Spring 2005 refueling outage (A2R11). A request for relaxation from the Order was previously submitted, reviewed and approved [see letter dated September 11, 2006 from T. J. McGinty (NRR) letter to C. Crane (Exelon), ADAMS Accession No. ML 062430598].