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10 CFR 50.55a (a)(3)(i)

October 9, 2001
BW010103

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 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: Braidwood Station Interval 2 Inservice Inspection Program:
Relief Request I2R-40, Relief From Examination Percentage Requirements
of the ASME Boiler and Pressure Vessel Code Section XI

References: (1) Letter from T. J. Tulon (Exelon Nuclear) to U.S. NRC, "Braidwood Station
Interval 2 Inservice Inspection Program: Relief Request I2R-39, "Alternative
to the ASME Boiler and Pressure Vessel Code, Section XI, Requirements for
Class 1 and Class 2 Piping Welds," dated October 16, 2000.

(2) NRC Information Notice 98-44, "Ten-Year Inservice Inspection (ISI)
Program Update for Licensees that Intend to Implement Risk-Informed ISI of
Piping."

As required by 10 CFR 50.55a(3), "Codes and Standards," Braidwood is submitting, for U. S. Nuclear Regulatory Commission (NRC) approval, a proposed alternative to the 1989 edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components." The alternative proposed by Braidwood Station in request I2R-40 seeks relief from the minimum percentage of completed Class 1 and 2 piping welds that are credited in the first Inservice Inspection period.

Relief from the ASME Section XI Period 1 examination percentage requirements would allow Braidwood Unit 2 to close-out the Period 1 percentage requirements based on the RI-ISI weld population and have a consistent implementation of the Risk Informed requirements from the start of Interval 2. Welds and components that are not included in the scope of the RI-ISI program are currently meeting and will continue to meet all ASME Section XI program or augmented requirements for selecting and crediting examinations.

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The following augmented programs are not included in the RI-ISI program and remain unaffected by this relief request:

- Stagnant Borated Water Systems (IE Bulletin 79-17)
- Service Water Integrity Program (G.L. 89-13)
- Flow Accelerated Corrosion (FAC) (G.L. 89-08)
- High Energy Line Breaks (USNRC Branch Technical Position MEB 3-1)

The discussion contained in the attachment, Relief Request I2R-40, demonstrates that the proposed alternative would provide an acceptable level of quality and safety. In addition, the proposed relief request is consistent with the alternative offered by the NRC in the Reference 2 generic communication.

Braidwood will schedule and credit both risk informed and the balance of the ASME Code exams consistent with ASME Section XI requirements, (i.e., a minimum of 16%, 50%, and 100% of required exams for each of the three periods and a maximum of 34%, 67% and 100% per period). Selected Risk Category 2, 3, 4, and 5 welds that have been examined in Period 1 prior to approval of the RI-ISI program will be credited in the RI-ISI program.

In order to effectively incorporate the risk informed program into the remainder of the First Inspection Period, Braidwood Station is requesting resolution of the proposed alternative by February 1, 2002.

Please direct any questions you may have regarding this submittal to Ms. Amy Ferko, Regulatory Assurance Manager, at (815) 417-2699.

Sincerely,


James D. von Suskil
Site Vice President
Braidwood Station

Attachment: Braidwood Station Relief Request I2R-40

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

bcc: NRC Project Manager for Braidwood Station – NRR
Office of Nuclear Facility Safety - Illinois Department of Nuclear Safety
Nicholas Reynolds - Winston and Strawn
Vice President – Regulatory Services (w/o enclosure)
Site Vice President - Braidwood Station
Regulatory Assurance Manager - Braidwood Station
Director, Licensing and Compliance – Braidwood and Byron Stations (w/o enclosure)
Braidwood Nuclear Licensing Administrator
Exelon Document Control Desk Licensing (Hard Copy)
Exelon Document Control Desk Licensing (Electronic Copy)

Attachment

**Relief Request I2R-40
Relief From Examination Percentage Requirements
of the ASME Boiler and Pressure Vessel Code Section XI**

RELIEF REQUEST I2R-40
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COMPONENT IDENTIFICATION

Unit: 2
Code Class: 1 and 2
Examination Categories: B-F, B-J, C-F-1, and C-F-2
Examination Item Numbers: B5.10, B5.40, B5.70, B9.11, B9.21, B9.31, B9.32, B9.40, C5.11, C5.21, C5.30, C5.41, C5.51, C5.70, and C5.81

Description: Alternative to the minimum examination completion percentages for Braidwood Unit 2 Class 1 pressure retaining dissimilar metal welds and pressure retaining welds in piping and Class 2 pressure retaining welds in austenitic stainless steel and carbon steel piping.

Component Numbers: All welds in ASME Section XI (1989 Edition) Code Categories B-F, B-J, C-F-1, and C-F-2 selected for examination in the Braidwood Unit 2 2nd Inspection Interval.

References: 1) Letter from T. J. Tulon (Exelon Nuclear) to U.S. NRC, "Braidwood Station Interval 2 Inservice Inspection Program: Relief Request I2R-39, "Alternative to the ASME Boiler and Pressure Vessel Code, Section XI, Requirements for Class 1 and Class 2 Piping Welds," dated October 16, 2000.

2) NRC Information Notice 98-44, "Ten-Year Inservice Inspection (ISI) Program Update for Licensees that Intend to Implement Risk-Informed ISI of Piping"

CODE REQUIREMENT

ASME Section XI, Subparagraph IWB-2412(a) requires:

"With the exception of the examinations that may be deferred until the end of the interval ... , the required examinations in each examination category shall be completed during each successive inspection interval in accordance with Table IWB-2412-1."

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Table IWB 2412-1, "Inspection Program B," lists the minimum and maximum percentages of examinations that are to be credited in an Inspection Period. For a 2nd Interval inspection program, the 1st period has a minimum of 16% of examination to be credited. Likewise, for Class 2 components ASME Section XI, Subparagraph IWC-2412 requires:

"The required examinations in each examination category shall be completed during each inspection interval in accordance with Table IWC-2412-1"

Similarly, ASME Section XI, Subparagraph IWC-2412 and Table IWC 2412-1, "Inspection Program B," establish 16% as the minimum percentage of examinations in an examination category that are to be credited in Inspection Period 1 of Inspection Interval 2.

CODE REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

Braidwood is requesting relief from the required minimum percentage (16%) for ASME Section Code Categories B-F, B-J, C-F-1, and C-F-2 in accordance with Tables IWB-2412-1 and IWC-2412-1. The relief is requested for Braidwood Unit 2

BASIS FOR RELIEF

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested on the basis that the proposed alternative would provide an acceptable level of quality and safety. Also, this proposed relief request is consistent with the alternative offered by the NRC in the reference (2) generic communication.

Braidwood will implement a Risk-Informed Inservice Inspection (RI-ISI) program that follows the guidelines of EPRI Topical Report TR-112657 when the RI-ISI relief request is approved by the NRC.

However, this relief request (I2R-40) will allow for the completion of the NRC review of the RI-ISI relief request and will eliminate the performance of piping examinations that may no longer be required once the RI-ISI program is in place.

Relief from the ASME Section XI minimum examination percentage requirements would allow Braidwood Unit 2 to close-out the Period 1 based on the cumulative percentage that has been completed to date. The first Inspection Period for Unit-2 is scheduled to end on October 16th, 2002 with the last opportunity for completion of credited examinations for the first Inspection Period during the Unit-2 Spring 2002 refueling outage.

ISI Program Plan
Braidwood Station Units 1 & 2, Second Interval

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Braidwood Unit 2 Section XI percentages of welds completed to date for Interval 2, Period 1 are listed below.

Unit	XI Category	Number/Percent	
Unit 2	B-F	2/14	14%
	B-J	40/396	10%
	C-F-1	12/84	14%
	C-F-2	5/57	3%

With the approval of the RI-ISI program, the percentage of completed Category R-A butt welds for Unit 2 for Interval 2, Period 1 would be 24% (41 of 171), which represents the percentage of butt welds examined under the Section XI program to date and also within the butt welds population selected for examination under the anticipated RI-ISI program. Although the total population of RI-ISI selected welds for Unit 2 is 269, the butt welds are tracked separately since the socket welds are examined by the VT-2 method each refuel outage.

PROPOSED ALTERNATE PROVISIONS

Braidwood will close out the first Inspection Period based on the percentage of Categories B-F, B-J, C-F-1, and C-F-2 that have been completed to date.

Upon approval of the RI-ISI program, Braidwood Unit 2, using the RI-ISI scope and with the examinations completed to date, will meet the requirements of IWB 2412-1 and IWC 2412-1 for Period 1 of Interval 2 by crediting approximately 24% of Category R-A welds. The remainder of the Category R-A welds (approximately 76%) will be examined during the second and the third Inspection Periods of the second Inspection Interval.

PERIOD FOR WHICH RELIEF IS REQUESTED

Relief is requested for the first Inspection Period of the second Inspection Interval on Unit-2.
