

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

www.exeloncorp.com

10 CFR 50.55a

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U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
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Byron Station, Units 1 and 2  
Facility Operating License Nos. NPF-37 and NPF-66  
NRC Docket Nos. 50-454 and 50-455

Subject: Inservice Inspection Program Relief Request I3R-01

In accordance with 10 CFR 50.55a, "Codes and standards," paragraph (a)(3)(i), Exelon Generation Company, LLC (EGC), is requesting relief from the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," on the basis that the proposed alternative provides an acceptable level of quality and safety.

Specifically, relief is being sought to reduce the duration of the Byron Station, Unit 2, second inservice inspection (ISI) interval in order to create a common third ISI interval for Byron Station Unit 1 and Unit 2. In addition, relief is requested to reduce the first containment inservice inspection (CISI) interval for Byron Station, Units 1 and 2, which will permit subsequent CISI interval dates to be synchronized with the future ISI Intervals for both units. The net effect of this request is to establish one common interval for both the ISI and CISI Programs at Byron Station. The details of the request for relief are enclosed.

EGC requests approval of this request by May 2006 in order to support the Byron Station, Unit 2, conversion to the common, third ISI interval start date. Should you have any questions concerning this letter, please contact David J. Chrzanowski at (630) 657-2816.

Respectfully,



David M. Hoots  
Plant Manager  
Byron Nuclear Generating Station

DMH/jl/rh

Enclosure: Byron Station Relief Request I3R-01

A047

**Enclosure**

**Byron Station**

**Relief Request I3R-01**

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**Request for Relief for Alternative Requirements for the Synchronization of Ten-Year ISI Intervals between Unit 1 and Unit 2 for Class 1, 2, 3, MC, and CC Components In Accordance with 10 CFR 50.55a(a)(3)(i)**

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**1.0 ASME CODE COMPONENT AFFECTED:**

Code Class: 1, 2, 3, MC, and CC  
Reference: IWA-2430  
IWA-2432  
Examination Category: All  
Item Number: All  
Description: Synchronization of Ten-Year Inservice Inspection (ISI) Intervals between Unit 1 and Unit 2. In addition, alignment of Containment Inservice Inspection (CISI) Ten-Year Intervals for Class MC and CC with the synchronized Unit 1 and 2 Ten-Year ISI Interval.  
Component Number: All Class 1, 2, 3, MC, and CC Components

**2.0 APPLICABLE CODE EDITION AND ADDENDA:**

The Inservice Inspection program is based on the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, 2001 Edition through the 2003 Addenda.

**3.0 APPLICABLE CODE REQUIREMENT:**

The following Code requirements are paraphrased from the 2001 Edition through the 2003 Addenda of ASME Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," (Code).

Paragraph IWA-2430(b) requires the inspection interval to be determined by calendar years following placement of the plant into commercial service.

Paragraph IWA-2432, "Inspection Program B," requires that each inspection interval consist of a ten-year duration, except as modified by IWA-2430(d) which permits the inspection interval to be reduced or extended by as much as one year, provided that successive intervals are not altered by more than one year from the original pattern of intervals.

**4.0 REASON FOR REQUEST:**

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested from the ten-year interval requirements contained within IWA-2430(b) and (d) and IWA-2432 for the Byron Station, Unit 2, ISI Program and the Byron Station, Units 1 and 2, CISI Programs on the basis that the proposed alternative would provide an acceptable level of quality and safety.

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Specifically, relief is being sought to reduce the duration of the Byron Station Unit 2, second ISI interval in order to create a common ISI interval for Byron Station Unit 1 and Unit 2. In addition, relief is requested to reduce the first CISI interval for Byron Station Unit 1 and Unit 2, which will permit subsequent CISI interval dates to be synchronized with the future ISI intervals for both units. The net effect of this request is to establish one common interval for both the ISI and CISI Programs at Byron Station Units 1 and 2.

Currently, the Byron Station, Unit 1, second ISI interval is scheduled to end on January 15, 2006 and the Byron Station, Unit 2, second interval will end on August 21, 2007. This creates about a one and one-half year gap between the two units' ISI Programs which may likely result in different governing code editions, different program requirements, and the need for different parallel implementing procedures.

Reducing the duration of the second ISI interval for Byron Station, Unit 2, by approximately one and one-half years will permit the commencement of its third ISI interval to coincide with the start of the third ISI interval for Byron Station, Unit 1, and hence will establish a joint inspection interval with common start and end dates moving forward. This will assure both ISI Programs use the same code edition and addenda for the next and successive intervals and will likewise establish common implementing procedures for both units.

Any examination methods unique to and specifically required in the remainder of the Byron Station, Unit 2, 2nd interval, third ISI period under the previous ISI interval Code (i.e., ASME Section XI, 1989 Edition), that will likewise be required in the next ISI Interval, will be scheduled and completed in the first ISI period of this subsequent interval. The examinations will be conducted and credited under the rules of the code of record applicable to the new interval. These examinations originally unique to the remainder of the third period of the previous interval for Unit 2 will be conducted in the first ISI period of all subsequent ISI intervals, and deferral to the end of future intervals will not be available. This method of scheduling will maintain the original sequence of examinations and therefore will not affect the frequency of examination.

The second part of this relief request is to similarly modify the CISI Program interval dates. CISI Programs were initially required by regulation (i.e., 10 CFR 50.55a) as amended by a Rule change, "Codes and Standards for Nuclear Power Plants; Subsection IWE and Subsection IWL," published in Federal Register (61 FR 41303) and effective on September 9, 1996. Accordingly, the Byron Station CISI Program was prepared and implemented in accordance with the 1992 Edition through the 1992 Addenda of Subsections IWE, "Requirements for Class MC and Metallic Liners of Class CC Components of Light-Water Cooled Plants," and IWL, "Requirements for Class CC Concrete Components of Light-Water Cooled Plants," of the ASME Section XI Code as modified by the regulation at that time. Further relief has since been requested and approved by the NRC on September 18, 2000, to utilize the 1998 Edition of the Section XI Code for the Subsections IWE and IWL CISI Programs at Byron Station, Unit 1 and Unit 2.

All examinations and tests required by the CISI Program to date have been implemented in accordance with the established schedule. For the IWE portion of the program, all the examinations scheduled for the first and second inspection periods have been completed. Currently, there are no containment surfaces or components requiring designation as augmented examination areas.

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Reducing the duration of the first CISI Interval for Byron Station, Unit 1 and Unit 2, by approximately two and one-half years will permit commencement of the second CISI interval for Class MC surfaces and CC liners to coincide with the start of the joint third ISI interval for Class 1, 2, and 3 components as established above. This will result in both the ISI and CISI Programs being under the same code edition and addenda for the next and successive intervals. For the rolling five-year IWL frequency applicable to Class CC components that are subject to Subsection IWL requirements, the current schedule will be maintained, and the inspections will be conducted in accordance with the ASME code of record for Byron Station at the time of examination.

The supplementary information contained within Section 2.2, "Section XI," of the Rule change, "Industry Codes and Standards; Amended Requirements," (published in 67 FR 60520) dated September 26, 2002, contains statements supporting the proposed alternative for modifying the CISI Interval. Specifically, the information pointed out that 10 CFR 50.55a(g)(4)(ii) does not prohibit licensees from updating to a later edition and addenda of the ASME Section XI Code midway through a ten-year IWE and IWL examination interval. Additionally, the information advised that licensees wishing to synchronize their 120-month intervals may submit a request in accordance with Section 50.55a(a)(3) to obtain authorization to extend or reduce 120-month intervals.

Using the common interval date justified above and based on the current Byron Station, Unit 1, ISI Program dated January 16, 2006, the code of record for the third interval ISI and second interval CISI Programs is to be set on January 15, 2005 (i.e., 12 months prior to the start of the successive interval in accordance with 10 CFR 50.55a(g)(4)(ii)). On January 15, 2005, the latest edition and addenda of the Code incorporated by reference in 10 CFR 50.55a(b)(2) of the regulation was the 2001 Edition through the 2003 Addenda. Therefore, Byron Station will utilize the 2001 Edition through the 2003 Addenda of Section XI to develop the ISI Program update for the third ISI interval and second CISI interval.

Exelon Generation Company, LLC (EGC) concludes that authorizing the proposed alternative as described above provides an acceptable level of quality and safety, and does not adversely impact the health and safety of the public.

**5.0 PROPOSED ALTERNATIVE AND BASIS FOR USE:**

As an alternative to the full ten-year interval duration requirements of IWA-2430(b) and (d) and IWA-2432 for the Unit 2 second ISI Interval and for the Units 1 and 2 first CISI intervals, EGC proposes to modify the interval dates of the Byron Station, Unit 2, second ISI interval and of the Byron Station Units 1 and 2 first CISI intervals. This will permit the subsequent ISI and CISI Programs to share a common inspection interval and to implement common code editions for Class 1, 2, 3, MC, and CC components. The common code of record for the third interval ISI programs and second interval CISI programs will be the 2001 edition through the 2003 addenda of ASME Section XI.

As a result of these interval modifications, the start date of the third interval ISI programs and the second interval CISI programs will be January 16, 2006 for both Byron Station units. Using this date, the Byron Station Unit 1 Fall 2006 refueling outage (i.e., B1R14) and the Byron Station Unit 2 Spring 2007 refueling outage (i.e., B2R13) will be the first refueling outages of the next intervals. The intervals will be scheduled in 10-year increments from this

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point forward with the modifications allowed by IWA-2430 fully available to future intervals and periods of the adjusted Programs (Byron Station Unit 2 ISI; Byron Station Unit 1 CISI; and Byron Station Unit 2 CISI) based on this new common interval date replacing the sequence established by the commercial service dates of the respective units. The Byron Station Unit 1 ISI Program, for which the common interval is based, will maintain its current schedule under the requirements of IWA-2430.

All inspection periods for Class 1, 2, 3, and MC surfaces and CC liners will commence for the next interval based on the modified common interval start date. For Byron Station Unit 2, any examination methods unique to and specifically required in the third period under the previous interval, that will likewise be required in the next interval, will be scheduled and completed in the first period of the subsequent interval. The examinations will be conducted and credited under the rules of the new Code of record (i.e., 2001 edition through the 2003 addenda). These examinations originally unique to the third period of the previous interval will henceforth be conducted in the first period of all subsequent ISI intervals, and deferral to the end of future intervals will not be allowed.

In addition, the rolling five-year IWL frequency applicable to Class CC components that are subject to Subsection IWL requirements will be maintained as currently scheduled. The date of the first examination performed prior to September 9, 2001, to satisfy 10 CFR 50.55a(g)(6)(ii)(B)(2), at that time, titled "Expedited examination of containment," will be maintained in establishing the subsequent five-year rolling frequency. These inspections will be conducted in accordance with the ASME Code of record for Byron Station at the time of examination.

**6.0 DURATION OF PROPOSED ALTERNATIVE:**

Relief is requested to modify the end dates of the Byron Station, Unit 2 second ISI interval and of the Byron Station Units 1 and 2 first CISI intervals and the start and end dates of all subsequent ISI and CISI intervals for Byron Station, Unit 1 and Unit 2.

**7.0 PRECEDENTS:**

Similar relief requests for CISI interval changes have been approved for Susquehanna Steam Electric Station (i.e., Letter from R. L. Laufer, (U. S. NRC) to B. L. Shriver (PPL Generation), "Susquehanna Steam Electric Station, Units 1 and 2 – Third 10-Year Inservice Inspection (ISI) Interval Program Plan," dated September 24, 2004, ADAMS Accession Number ML042680078).