

**Proposed Relief Request from Section XI  
Repair/Replacement Documentation for  
Replacement of Pressure Retaining Bolting**

**Exelon Fleet Relief Request**



**Exelon** Generation®

## Section XI Requirements

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- ASME Section XI Repair/Replacements are governed by IWA-4000
- Many of the requirements contained in IWA-4000 are purely administrative in nature when dealing with routine replacement activities, specifically (references applicable to both 2007/2008 and 2013):
  - IWA-4141 requires Owner to develop a Repair/Replacement (R/R) program or plan and specification requirements for R/R activities
  - IWA-4142 requires the organization performing R/R activities have an established Quality Assurance Program for control of activities in accordance with the R/R program and plans
  - IWA-4150(c) requires an R/R plan be prepared whenever an R/R activity is to be performed
  - IWA-4150(d) requires that R/R plans be subject to review by enforcement and regulatory authorities having jurisdiction at the plant site
  - IWA-4511 requires that personnel performing NDE required by the Construction Code shall be qualified and certified in accordance with the Construction Code identified in the R/R Plan.

## Section XI Requirements

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The NRC staff has already acknowledged the maturity of the ASME Code and the minimal preparation, submittal, and retention of records and reports for ASME Section XI Repair/Replacements are governed by IWA-6000. Many of these requirements are also purely administrative in nature, specifically (references applicable to both 2007/2008 and 2013, unless specified):

- IWA-6210(e) [2007E/A2008A]/IWA-6211(e) [2013E] requires the Owner to prepare the Owner's Report for Repair/Replacement Activity, Form NIS-2 upon completion of all required activities associated with the R/R plan
- IWA-6210(f) [2007E/A2008A]/IWA-6211(g) [2013E] requires the Owner to submit Forms NIS-1 and NIS-2 to the Inspector and obtain the required signature
- IWA-6350 requires the R/R Plans and Form NIS-2 be retained
- Code Case N-532-5, "*Repair/Replacement Activity Documentation Requirements and Inservice Inspection Summary Report Preparation and Submission*" provides alternatives to the ASME Section XI requirements stated previously and provides alternatives to Section XI requirements, including substituting the Form NIS-2 with Form NIS-2A. Code Case N-532-5 is unconditionally approved for use under RG 1.147, Revision 19.

## Reason for Relief Request

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As shown in the previous slides, there are numerous administrative requirements associated with ASME Section XI R/R activities. In reviewing company processes for efficiency, it was observed that a major amount of resources are being applied to R/R activities associated with routine bolting replacements which are not the result of inservice degradation, but are attributed to:

- Bolting material lost during joint disassembly/maintenance
- Bolting material replaced for maintenance expediency as opposed to spending resources cleaning existing material for reinstallation
- Bolting material replaced due to damage from mechanical impact (e.g., damaged from tooling, scaffold pole impact, etc.)
- Bolting material replaced in order to attain full nut engagement after replacing existing washers with hardened washers recommended by industry good bolting practices

## Reason for Relief Request

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- As part of outage preparation activities, R/R plans are often requested as contingency plans. Plans are initiated and routed through the review cycle and although not used, they still must be tracked to meet post outage reporting requirements (i.e., 90 Day Report).
- A conservative estimate determined that up to 2500 person hours are spent annually on contingency R/R plans across the Exelon fleet.

## Proposed Alternative

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- Exelon proposes to limit application of the ASME Section XI R/R program only to bolting that is not currently associated with Section XI bolting categories subject to inservice inspection (Categories B-G-1, B-G-2, C-D) and not to any Section XI bolted connections where the existing bolting material must be replaced due to unacceptable service induced conditions. These limitations assure that required preservice examinations and/or evaluations required due to unacceptable conditions (e.g., IWA-4160 for “Verification of Acceptability”) are retained.
  - Documentation of work activities and bolting replacements to which this relief request will be applied will be achieved through the normal processes of procurement, planning, and maintenance performed under the Exelon Nuclear Quality Assurance Program.
  - The proposed relief request only forgoes completion of an R&R Plan and NIS-2 or NIS-2A within the described limitations of the request and does not eliminate any other administrative or technical requirements associated with bolting materials or installation and maintenance requirements.
  - Exelon will request review and approval by September 1, 2021 in order to be used for the Fall 2021 outages.
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# QUESTIONS/COMMENTS