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**Proposed Alternative Requirements for
Preservice Inspection Acceptance of
Volumetric Examinations**

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Agenda

- Introduction
- Discussion of Proposed Alternative
- Additional Considerations
- Schedule



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Introduction

- Reason for Request:
 - Establish acceptable basis for limited use of Section XI flaw evaluation on Preservice weld indications.
 - Initial location for use of alternative is associated with Core Makeup Tank nozzle welds provided by fabricator.
 - These welds passed the required ASME Section III examinations.
 - Different Examination techniques used by Section XI during preservice inspection (PSI) identified weld indications.
- Section XI Code provisions to use flaw evaluation for PSI are not yet endorsed/accepted by NRC.
- Operating experience has shown that large through wall flaws and leakages have developed in previously repaired welds as a result of weld residual stresses.



Proposed Alternative Requirements for Preservice Inspection Acceptance of Volumetric Examinations

- Current Preservice Inspection Requirement (ASME Section XI 2007 Edition with 2008 Addenda):
 - IWB-3112(c) states, “A component whose volumetric or surface examination (IWB-2200) detects flaws, other than the flaws of IWB-3112(b), that exceed the standards of Table IWB-3410-1 is unacceptable for service.”
- Propose alternative in accordance with 10 CFR 50.55a(z)(1) to allow use of flaw evaluation requirements in ASME Section XI 2017.
- Proposed alternative applicable to Class 1 and Class 2 components (IWB and IWC).
- Include additional requirements to provide as added assurance for system integrity.



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Vogtle 3&4



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Specific Requirements of ASME XI 2017

- ASME XI 2017 Edition has been put forth by the ASME Boiler and Pressure Vessel code committee as requirements that establish an acceptable level of quality and safety for nuclear power plants.
- Specific provisions of 2017 code, requires:
 - Confirmation by surface or volumetric examination to be non-surface-connected
 - Acceptance by analytical evaluation in accordance with the provisions of IWB-3132.3 to the end of the service lifetime of the component.
 - Reexamination in accordance with the requirements of IWB-2420(b) and IWB-2420(d).



Additional Requirements for Code Alternative

- The use of this alternative shall not exceed 10% of the total number of the ASME Section XI nonexempt welds in a Class 1 or 2 system.
- An assessment of each weld that is accepted using IWB-3600/IWC-3600 will be documented.
 - The assessment shall include a review of fabrication methods, weld methods and materials, and NDE results, including comparison of ASME III and XI exams, as applicable.
- This alternative is not applicable to the SG-to-RCP welds.



Additional Considerations

- Use of ASME Section XI 2017 Edition is planned for the Vogtle 3&4 Inservice Inspection (ISI) program.
- Use of Section XI 2017 Edition as the basis for the alternative provides consistency between the proposed alternative and the future ISI program requirements.



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Schedule

- SNC planning submittal of code alternative by end of May.
- Plan pre-submittal meeting: May 21
- Requesting approval by September 30, 2020 to support ASME ITAAC.



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