

**U.S. NRC**

UNITED STATES NUCLEAR REGULATORY COMMISSION

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**NRC Snubber Report & Updates**  
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## Topic for Discussion

- Title 10 of the Code of Federal Regulations (10 CFR) Section 50.55a Rulemaking Updates
- 10 CFR 50.55a Rulemaking Updates – Paragraph 10 CFR 50.55a(z)
- Temporary Instruction (TI) Procedure 2515/189 for Inservice Examination and Testing of Snubbers
- Snubber Program per 10 CFR 50.55a
- Corrective Action
- Generic Communication
- Conclusion



## 10 CFR 50.55a Rulemaking Updates

- Last ASME Code Rulemaking issued on June 21, 2011 (Federal Register, Vol. 76, No. 119, page 36232-36279, dated June 21, 2011).
- Rulemaking incorporates by Reference the 2004 Edition with 2005 and 2006 Addenda of the American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code , and the 2005 Addenda through 2008a Edition of ASME Boiler and Pressure Vessel (B&PV) Code Section XI.
- By Federal Register Notice 79FR 65776, dated November 5, 2014, which became effective on December 5, 2014, the paragraphs headings in 10 CFR 50.55a were revised.



## 10 CFR 50.55a Rulemaking Updates – 10 CFR 50.55a(z)

- 10 CFR 50.55a(z) *{Previously 10 CFR 50.55a(a)(3)}*

Alternative to codes and standards requirements.

A proposed alternative must be submitted and authorized.

- 10 CFR 50.55a(z)(1) *{Previously 10 CFR 50.55a(a)(3)(i)}*  
Acceptable level of quality and safety.

The proposed alternative would be provide an acceptable level of quality and safety.

- 10 CFR 50.55a(z)(2) *{Previously 10 CFR 50.55a(a)(3)(ii)}*

Hardship without a compensating increase in quality and safety.

Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.



## Temporary Instruction (TI) 2515/189

- NRC issued Regulatory Issue Summary (RIS) 2010-06, and Enforcement Guidance Memorandum (EGM) 2010-01, related to Inservice Examination and Testing of Snubbers.
- TI 2515/189 required NRC inspectors to verify that snubber programs are consistent with RIS 2010-06 and EGM 2010-01.
- NRC regions have completed TI 2515/189 inspection of the selected plants by December 31, 2014.
- NRC regions selected two plants from each region for TI 2515/189 inspection with exception to Region II.
- NRC Region II selected two additional plants for TI inspection.
- Results of the TI inspection are provided in next slides.

## TI 2515/189 Inspection Results

Selected Plants for TI Inspection	TI Inspection meets Plant's Snubber Program Requirements as specified in Licensee-Controlled Document	Applicable ASME Code or Alternative used for Snubber Program	Remarks Based on TI Inspection Report
Calvert Cliffs Unit 1	Yes	Relief Request in lieu of ASME Section XI	
Susquehanna Unit 1	Yes	ASME OM Code in lieu of ASME Section XI	
Catawba Unit 1	Yes	Relief Request in lieu of ASME Section XI	
V. C. Summer Unit 1	Yes	No Information in TI Inspection Report	
Browns Ferry Unit 1	Yes	Relief Request in lieu of ASME Section XI	
Turkey Point Unit 4	Yes	Technical Specifications (TS) in lieu of ASME Section XI without NRC approval	Turkey Point initiated Correction Action

## TI 2515/189 Inspection Results (cont.)

Selected Plants for TI Inspection	TI Inspection meets Plant's Snubber Program Requirements as specified in Licensee-Controlled Document	Applicable ASME Code or Alternative used for Snubber Program	Remarks Based on TI Inspection Report
Quad Cities Unit 2	Yes	ASME OM Code	TI Inspection Report states that snubber program is not converted from ASME Section XI to ASME OM Code.
Prairie Island Unit 1	Yes	ASME OM Code	TI Inspection Report states that snubber program is not converted from ASME Section XI to ASME OM Code.
Palo Verde	Yes	Relief Request and ASME OM Code	TI Inspection Report states that snubber program is not converted from ASME Section XI to ASME OM Code.
Arkansas Nuclear One	Yes	ASME Section XI and ASME OM Code	TI Inspection Reports states that program updated with applicable ASME Section XI and ASME OM Code.





## Summary of TI Results

- Confusion between ASME Section XI (ASME/ANSI OM Part 4) and ASME OM Code requirements.
  - To clarify the confusion, see NUREG-1482, Revision 2, Appendix- A, Section 2.1.4.
- Confusion for “Code of Record,” for snubber examination and testing between Inservice Inspection (ISI) or Inservice Testing (IST).
  - To clarify the confusion, see NUREG-1482, Revision 2, Appendix-A, Sections 2.
- Confusion while using TS and meeting 10 CFR 50.55a requirements.
  - To clarify confusion, see RIS-2010-06 and NUREG-1482, Revision 2, Appendix-A, Section 2.
- All selected plants meet the inservice examination, testing and SLM requirements as specified in their applicable licensee-controlled documents.



## Snubber Program per 10 CFR 50.55a

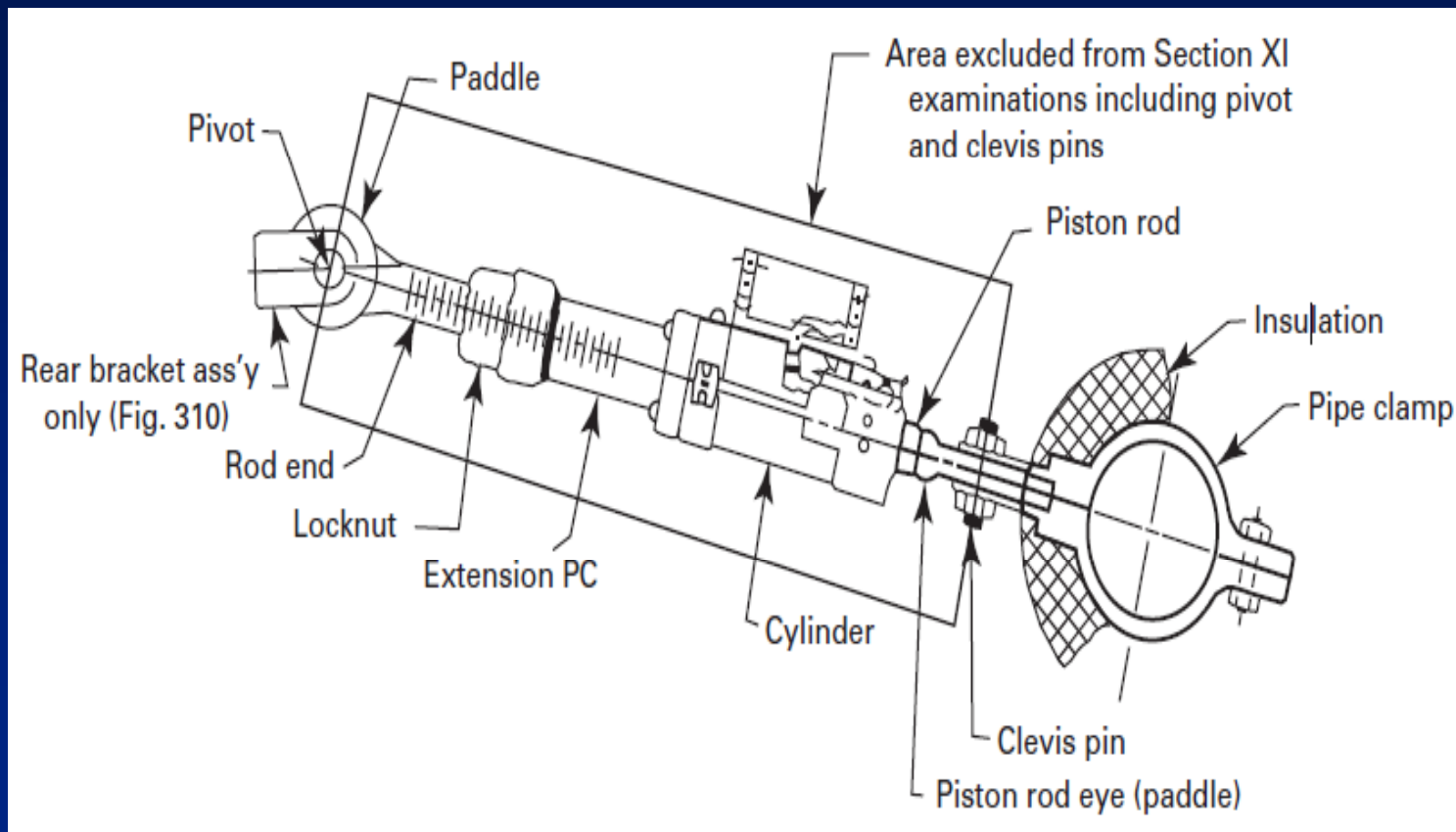
- In the current published 10 CFR 50.55a ASME Code rulemaking, the only applicable ASME Code requirements for snubber inservice examination and testing are in the ASME OM Code, because these have been deleted from the 2006 Addenda and later Editions of Section XI.
- In future the ASME OM Code, Subsection ISTD along with the applicable ISTA, will be the only Code requirements governing snubber examination and testing.
- If any licensee's "Code of Record" is the 2006 Addenda or later Edition and Addenda of the ASME Section XI, a Relief Request is required for not using ISTD of the ASME OM Code.

## **Snubber Program per 10 CFR 50.55a (cont.)**

- ASME B&PV Code, Section XI, IWF-5000, 2006 addenda deleted the requirements for visual examination & testing of snubbers.
- IWF-1220, Footnote 1 of the ASME Section XI (2006 addenda) states that snubber examination and test requirements can be found in the ASME OM Code. Figure IWF-1300-1(f) (next slide) shows the actual boundary.
- Inservice examination of support structures and attachments shall continue to be performed per ASME Section XI requirements.
- NUREG-1482, Revision 2, Appendix-A provides all requirements related to snubbers inservice examination and testing.

## Snubber Program per 10 CFR 50.55a (cont.)

Figure-1300-1(f)



## Corrective Action

- 10 CFR 50, Appendix B, Criterion XVI, Corrective Action states:

*“Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.”*



## Corrective Actions (cont.)

- NRC inspectors observed that some of the plants have too many corrective actions related to snubbers during a refueling outage.
- NRC also observed that some of the corrective actions initiated are repetitive when compare to corrective actions initiated in the previous refueling outages.
- NRC believes that proper implementation of service life monitoring (SLM) and maintenance of snubbers would eliminate the repetitive corrective actions and reduce the number of corrective actions.



## Generic Communication

- NRC issued Information Notice (IN) 2015-09 related to mechanical dynamic restraints (snubbers) lubricant (grease) degradation not identified due to insufficient service life monitoring.

## Conclusions

- Licensees who believe that some of the items discussed are applicable to their facilities may wish to review their current snubber program and modify their program as appropriate.





# Questions?

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