



**U.S.NRC**

UNITED STATES NUCLEAR REGULATORY COMMISSION

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# **Nuclear Industry Check Valve Regulatory Activities**

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## **Disclaimer**

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## **NRC Regulatory Activities applicable to Check Valves**

- Current 10 CFR 50.55a Regulatory Requirements
- ASME BPV Code and OM Code Case Rulemaking including Regulatory Guide (RG) 1.192 update
- NUREG-1482 Revision 4
- ASME OM-2-2024 Code
- ASME QME-1-2023 and Reformatted QME-1
- Plant Restarts
- Mechanical Agitation Process for Check Valves
- Operating Experience



## Current 10 CFR 50.55a Regulatory Requirements

- Incorporates by reference 2022 Edition of ASME OM Code and 2021 Edition of ASME BPV Code with conditions
- Changes of note:
  - Removal of certain conditions on MOV testing, Check Valves, and Flow-Induced Vibration
  - New Condition 50.55a(b)(3)(vii): Snubber Visual Examination Interval Extension
  - New Condition 50.55a(b)(3)(x): Class 1 Pressure Relief Valve Sample Expansion



## **Current 10 CFR 50.55a Regulatory Requirements**

- 10 CFR 50.55a currently incorporates by reference Revision 5 to RG 1.192
- RG 1.192, Revision 5, lists OM Code Cases that are acceptable with or without conditions
- RG 1.192, Revision 5, accepts new ASME OM Code Cases OMN-28 through OMN-30 without conditions and OMN-31 with conditions.



# **10 CFR 50.55a 2023 BPV Code and Code Cases Rulemaking (Revision 41)**

- 2023 BPV Code Rulemaking in progress
- Direct final rule (DFR) planned to incorporate by reference acceptance of noncontroversial and unconditioned Code Cases in 10 CFR 50.55a.
- Proposed/final rule process will continue for biennial incorporation by reference of ASME Code editions and conditionally-approved Code Cases in 10 CFR 50.55a.
- First DFR for Code Cases in progress



## **NUREG-1482 Update**

- NRC staff has issued Draft Revision 4 of NUREG-1482, with public comment period closing April 14, 2025.
- 46 comments received from 4 separate commenters
- Staff is preparing responses to comments and finalizing NUREG for publication



## ASME OM-2 Code

- ASME has issued OM-2-2024, an IST Code for pumps, valves, and dynamic restraints (or components that perform similar functions) in new and advanced reactors.
- NRC staff is considering a new Regulatory Guide (RG) for acceptance of the OM-2 Code with applicable conditions.



# **ASME QME-1-2023 and reformatted QME-1**

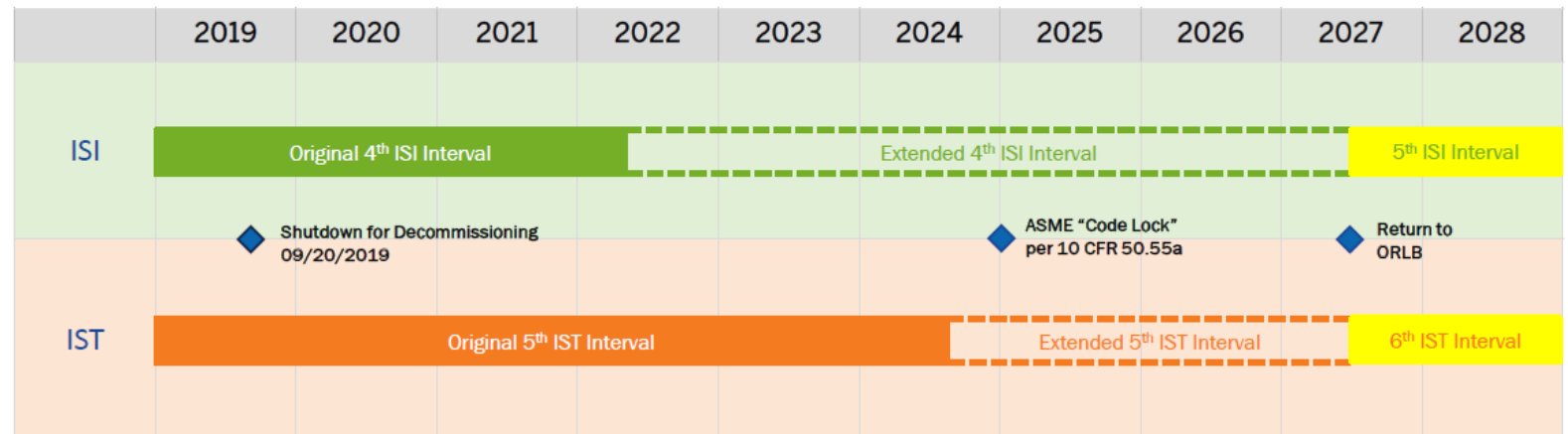
- QME-1 updated in 2023
- ASME has prepared a reformatted QME-1 standard to be more applicable for new and advanced reactors that might not use water-cooled systems
- NRC staff plans to revise RG 1.100 to accept QME-1-2023 and reformatted QME-1 with conditions when available

# Plant Restarts

- Plants are considering returning to operation from a decommissioning status
- What should these plants consider?

- [ML25070A169](#)

**ISI and IST Program Restoration Timeline**



# Mechanical Agitation Process for Check Valves

- Topic of 2024 NRC NIC Presentation (ML24137A239)
- Alternative Requests continue to be submitted
- Mechanical agitation is neither a repair nor replacement activity
- Control of this process is important for safety of plant and personnel
- Alternative requests must be authorized by NRC prior to implementation.
- Refer to precedents like Sequoyah (ML22263A375, revised ML22304A186)

## **Recent Operating Experience**

- Several instances of check valve performance resulting in failure to meet minimum flow requirements for pump tests in proximity
  - ISTB-6300
  - Appendix II scope
- Potential challenges to multiple trains

## **Conclusion**

- Licensees should review current 10 CFR 50.55a and ongoing rulemakings with respect to check valve testing activities.
- NRC staff remains engaged in topics of interest to the check valve user community



# QUESTIONS?

**Future Questions**

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