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Protecting People and the Environment

Air Operated Valve Regulatory Activities

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NRC Regulations

- 10 CFR 50.55a – Codes and Standards (Inservice Testing)
- 10 CFR 50.65 – Maintenance Rule
- 10 CFR 50.69 – Risk-Informed Treatment
- 10 CFR Part 50, Appendix A – General Design Criteria
- 10 CFR Part 50, Appendix B – Quality Assurance
- 10 CFR Part 100 – Reactor Site Criteria (Seismic)

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Current AOV Issues/Activities

- 50.55a Rulemaking
- Regulatory Guide 1.192 Revision 3
- NRC Initiative to Update Reactor Oversight Process (ROP) Engineering Inspections

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50.55a Rulemaking

- Rulemaking for ASME OM Code 2015 Edition and 2017 Edition completed
- Published in the Federal Register and issued for public comment November 9, 2018
- Public comment period 75 days (last day 1/23/2019)
- NRC staff will address public comments
- Final rule tentatively issued 12 months later

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50.55a Rulemaking – Items of Interest in Proposed Rulemaking

- Add NRC Inservice Testing (IST) Plan submittal and reporting requirements
- Revise 10 CFR 50.55a(f)(4)(i) and (ii) and (g)(4)(i) and (ii) to relax the time schedule for complying with the latest edition and addenda of the ASME OM or BPV Codes for IST and Inservice Inspection (ISI) programs, respectively, from 12 months to 18 months
- Streamline the references to editions of the ASME OM Code in each condition to simplify future 10 CFR 50.55a rulemaking, and to update specific conditions to reflect the latest ASME OM Code editions.

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50.55a Rulemaking – Impact on AOV

- Mandatory Appendix IV "Preservice and Inservice Testing of Active Pneumatically Operated Valve Assemblies in Nuclear Reactor Power Plants" will now be required when updating to the next 10 Year IST interval to the 2017 Edition (or later editions) of the ASME OM Code

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Reg Guide 1.192 Operation and Maintenance Code Case Acceptability, ASME OM Code

- Regulatory guide (RG) lists OM Code Cases that are acceptable to the NRC for implementation in the Inservice Test (IST) of light-water-cooled nuclear power plants
- RG 1.192 Revision 2 is current applicable to Code Cases published in the 2009 Edition through the 2012 Edition of the ASME OM Code
- RG1.192 Revision 3 is applicable to Code Cases published in the 2015 Edition and 2017 Edition of the ASME OM Code

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Reg Guide 1.192 Operation and Maintenance Code Case Acceptability, ASME OM Code

- RG1.192 Revision 3 was published for public comment on August 16,2018 with a 75 day comment period
- NRC staff is currently addressing all comments
- Final approval of these code cases is currently scheduled for the fall of 2019

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NRC Initiative to Update ROP Engineering Inspections

- SECY-18-0113 “Recommendations for Modifying the Reactor Oversight Process Engineering Inspections” issued 11/13/2018
- Initiative is to improve effectiveness and efficiency of engineering inspections
- Primary focus of inspections remains unchanged
- Inspection sample selection has shifted since the 1990s from verifying compliance with the original plant design bases to inspecting licensee performance in maintaining risk significant equipment

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NRC Initiative to Update ROP Engineering Inspections

- Recommended changes include:
  - Perform inspections on a 4 year cycle instead of current 3 year
  - Inspection consolidation and two new types of inspections to be performed during the 4 year cycle, Comprehensive Engineering Team Inspection (CETI) and the Focused Engineering Inspection (FEI)
  - Focusing inspection towards operating experience, aging management, facility changes, and risk
  - NRC staff is evaluating an industry proposal to allow plants to perform a licensee self-assessment in lieu of one FEI during each 4 year cycle

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NRC ROP Initiative Summary

- Propose quadrennial inspection cycle, with a CETI or FEI inspection every year at each site. (1 CETI and 3 FEI)
- CETI to incorporate aspects of modifications, 10 CFR 50.59, and design bases assurance inspection with a focus on operating experience, aging management, and changes to the design basis and PRA model
- Development and implementation of new FEIs
- FEIs are intended to verify the licensee's implementation of NRC approved engineering programs (e.g., MOV, AOV, EQ). Topics chosen based on risk, operating experience and potential for engineering challenges.

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FEI – AOV

- FEI for AOVs will evaluate capability
  - Valve/Actuator design and safety function
  - Design basis conditions
  - Uncertainty assumptions applied
  - Diagnostic equipment
  - Weak link evaluations
  - Design basis capability tests
  - Design basis capability basis
- NRC staff is developing training for regional inspectors on implementation of FEI for AOVs

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QUESTIONS?

Future Questions

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