

# 10 CFR 50 Appendix H Rulemaking Activities

Public Meeting  
January 19, 2016



# Public Meeting Goals

- Provide overview of rulemaking activities for 10 CFR 50, Appendix H, Reactor Vessel Material Surveillance Program Requirements
- Discuss current staff considerations on update of Appendix H requirements
- Discuss rulemaking schedule
- Solicit stakeholder feedback

# Background and the Rulemaking Process

- SECY-14-0027- Commission direction to bifurcate Appendix G and Appendix H rulemaking activities
- Draft regulatory basis: publish for comment (April 2016)
- Publish final regulatory basis (September 2016)
- Proposed rule: publish for comment (includes draft regulatory guide) (October 2017)
- Final rule (includes regulatory guide) (January 2019)

# Staff Considerations for Revising Appendix H

- Revise incorporation by reference
  - ASTM E-2215-15
    - No intent to change existing requirements
  - ASTM E-185-15
    - Only applies to new plants
- Incorporation of ASTM standards into 10 CFR 50.55a, “Codes and Standards”
- Eliminate “beltline” term to clarify the materials that need to be monitored

*Proposed Text:*

B. Reactor vessels that do not meet the conditions of paragraph III.A of this appendix must have [all ferritic materials that are predicted to exceed a neutron fluence of  \$10^{17}\$  n/cm<sup>2</sup> \(E>1 MeV\) at the end of the design life of the vessel](#) monitored by a surveillance program that [contains a subset of those materials and complies with ASTM E 185 and ASTM E 2215](#), as modified by this appendix.

# Staff Considerations for Revising Appendix H

- HAZ testing requirement changes
  - ASTM E 2215-15 makes testing HAZ specimens optional
- Use broken specimens to generate data without requiring prior authorization
  - Has there been need to request authorization?

*Proposed Text:* III.B...

After testing, use of broken specimens to generate additional embrittlement data (for example, by re-constitution or metallurgical analysis) is permitted.

# Staff Considerations for Revising Appendix H

- Lengthen reporting requirements from 12 months to 18 or 24 months
  - Interested in feedback on benefits or drawbacks to 18 versus 24
  - Implications for pressure-temperature limit impact and sharing data for integrated programs to be prompt
- Clarifications to ASTM standards included in Regulatory Guide
  - Use of Regulatory Guide 1.190 for fluence determination versus secondary references in ASTM Standards
    - Consistent with current practice
  - Others under consideration
- Secondary reference treatment being evaluated
  - e.g. ASTM E 900

# Staff Considerations for Revising Appendix H

- Section 9.8 of ASTM E 2215-15 creates a requirement for implementing a dosimetry program if all capsules have been withdrawn
  - Feedback?
- Other potential changes
  - Minimum of three capsules withdrawn and tested during first 40 years
  - Change section IV.C to refer to pressure-temperature limits report rather than technical specifications
  - Still evaluating whether to address license renewal in Appendix H or in a regulatory guide.

# Staff Considerations for Revising Appendix H

- **Potential to revise integrated program requirements for simplification only**

*Original Text:*

III.C.1.e. There must be substantial advantages to be gained, such as reduced power outages or reduced personnel exposure to radiation, as a direct result of not requiring surveillance capsules in all reactors in the set.

III.C.2. No reduction in the requirements for number of materials to be irradiated, specimen types, or number of specimens per reactor is permitted.

*Proposed:* Delete III.C.1.e and III.C.2



# Path Forward

- Regulatory Basis Phase
  - Draft will go out for public comment (**April 2016**)
  - Public meeting during comment period
- Proposed Rule Phase
  - Proposed rule out for 75-day public comment period
  - Public Meeting during comment period
  - Draft regulatory guide out for comment with proposed rule (**October 2017**)
- Final Rule Phase
  - Regulatory guide issued with final rule (**January 2019**)

# Stakeholder Feedback

- Are the provisions being considered by NRC likely to increase cost or decrease costs? If so, how much?
- Are the provisions being considered by NRC likely to result in decrease or increase in the number of submittals to the NRC? If so, what kind and approximately how many per reactor per ten years?
- Are the provisions being considered by NRC adequate to address surveillance programs for future reactors?
- Are there other considerations NRC should be aware of?

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