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Public Meeting to Discuss the NRC Staff's Consideration of Options for a Potential Rulemaking on Security for Independent Spent Fuel Storage Installations

May 24, 2022

Purpose of this meeting

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- This is a Comment-Gathering Meeting.
- Discuss the U.S. Nuclear Regulatory Commission (NRC) staff's development of an options paper for the Commission regarding security for independent spent fuel storage installations (ISFSIs).
- At the appointed time, attendees will have the opportunity to ask questions and/or make comments about the options we're considering and the evaluation criteria we've developed; however, the NRC will not provide written responses to comments or questions raised.

Key Messages

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- Staff is evaluating the pros and cons of multiple options to develop a recommendation to the Commission in response to Staff Requirements Memorandum (SRM)-SECY-19-0100, "Discontinuation of Rulemaking – Independent Spent Fuel Storage Installation Security Requirements" (ADAMS* Accession No. ML21217A045).

- The existing regulatory framework provides reasonable assurance of adequate protection of public health and safety and the common defense and security.

* NRC's Agencywide Documents Access and Management System

Background

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- In SECY-07-0148, dated August 28, 2007 (ADAMS Accession No. ML080030050), the staff proposed to apply a risk-informed and performance-based approach to update the security requirements for ISFSIs.
  - Address potential security vulnerability identified in post-9/11 security assessments.
  - Improve regulatory clarity by implementing consistent requirements for general and specific ISFSI licensees regardless of ISFSI location.
  - Apply a “dose-based approach” to all ISFSIs in a new Title 10 *Code of Federal Regulations* (CFR) Part 73 regulation that would use an acceptance criterion equivalent to the 10 CFR 72.106 0.05-Sv (5-rem) dose limit for safety-based events.

Background (cont.)

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- On December 16, 2009, the staff published the draft regulatory basis for the proposed rulemaking to revise security requirements for facilities storing spent nuclear fuel and high-level radioactive waste (ADAMS Accession No. ML093280743).
- In SECY-10-0114, dated August 26, 2010 (ADAMS Accession No. ML101880013), the staff recommended reassessing the technical approach based on stakeholder comments prior to developing the final regulatory basis.
- In COMSECY-15-0024, dated September 11, 2015 (ADAMS Accession No. ML15229A231), the staff recommended re-evaluating whether rulemaking is warranted after five years, noting that the existing regulatory framework provides continued high assurance of adequate protection.

Background (cont.)

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- In 2018, the Commission directed that resources be allocated for the expedited ISFSI security rulemaking with the exclusive scope of codifying the requirements of the post-9/11 security orders.

- In SECY-19-0100, dated August 9, 2019 (ADAMS Accession No. ML19172A301), the staff requested Commission approval to discontinue the ISFSI security rulemaking.

- In SRM-SECY-19-0100, dated August 4, 2021 (ADAMS Accession No. ML21217A045), the Commission directed the staff to provide a notation vote paper with a full range of options for the ISFSI security rulemaking.

Considerations for rulemaking options

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- Stakeholder feedback on 2009 draft regulatory basis
- Insights from staff's efforts to develop an implementation framework for the dose-based approach
- Current and future ISFSI-security regulatory landscape
- Related NRC rulemaking activities
- Stakeholder feedback from this public meeting

Initial options under consideration

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- Option 1 – no action (status quo)
- Option 2 – codify orders only
- Option 3 – resume 2007 rulemaking to implement the dose-based approach
- Option 4 – perform future reassessment to identify rulemaking options for alternatives to the dose-based approach

Option 1 – no action (status quo)

- Maintain the current regulatory requirements and the post-9/11 security orders, which provide reasonable assurance of adequate protection of public health and safety and the common defense and security.
- Continue to address the appropriate security requirements for new license applicants on a case-by-case basis.

Option 2 – codify orders only

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- Proceed with the ISFSI security rulemaking with the exclusive scope of codifying the requirements of the post-9/11 ISFSI security orders.
- Due to the sensitive nature of some of the security requirements, some provisions would need to be maintained via orders.
- Note: In SECY-19-0100, the staff determined that this limited-scope rulemaking is not necessary for adequate protection and would not be cost justified.

Option 3 – resume 2007 rulemaking

- Implement a framework where ISFSI licensees would use the information provided by the NRC in combination with site-specific information to perform a calculation to ensure a 0.05-Sv (5-rem) dose limit is currently met, and, if not, to revise their protective strategy.
- Finalize the 2009 draft regulatory basis for the dose-based approach.
- Complete vulnerability assessments to define credible and reasonable security scenarios.
- Perform analyses to determine radiological release fraction values for all ISFSI cask types.
- Develop guidance for licensees on methods for performing the required dose assessments.

Option 4 – perform future reassessment of alternative technical approaches

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- Reassess alternative technical approaches to the dose-based approach to potentially identify technically viable, risk-informed rulemaking options for addressing any credible security vulnerability and to address any current concerns with regulatory clarity.

- Conduct further research using credible analysis methodologies to clearly define the risks associated with the potential security vulnerability for ISFSIs.

- Consider any implications arising from a final decommissioning rulemaking as well as current staff experience to reassess the concerns with regulatory clarity (e.g., “unnecessarily complex”) raised by staff in SECY-07-0148.

- Consider any implications arising from an enhanced security of special nuclear material rulemaking effort on security requirements for ISFSIs if spent nuclear fuel is included within the rulemaking’s scope.

Criteria for evaluating options

In determining which option is best, the staff will apply attributes based on the NRC's Principles of Good Regulation

- Independence
- Openness
- Efficiency
- Clarity
- Reliability

Current criteria for evaluating options

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- Considers current threat environment
- Considers current operational experience
- Increases regulatory predictability and consistency
- Requires access to classified information
- Considers recurring costs for NRC and industry

Planned next steps

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- Staff will develop a SECY paper to the Commission with options and a recommendation on the path forward for ISFSI security with consideration of public input on the options and evaluation criteria.

- Staff plans to provide the SECY paper to the Commission by the end of September 2022.

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Questions?

- Link to NRC public meeting feedback form:
  https://feedback.nrc.gov/pmfs/
- Email feedback to Johari.Moore@nrc.gov