



# Status Update on SECY Option Paper for Enhanced Security of Special Nuclear Material

Beth Reed, Security Specialist  
Office of Nuclear Reactor Regulation  
Nuclear Regulatory Commission

June 19, 2023

# Purpose of Presentation

- Focus on approach used to develop the Options SECY Paper
- Address why the NRC is developing an Options SECY Paper
- Review the drivers of this work
- Stakeholder interactions

# Background

- August 2018 – SRM-COMKLS-18-0003, “Fiscal Year 2020 Budget to the Commission” – Direction to staff to complete expedited, limited-scope rulemaking to codify post-9/11 security Orders
- In response to SRM-COMKLS-18-0003, the staff submitted SECY-19-0095 in October 2019
  - Staff recommended to discontinue rulemaking
- Commission responded in August 2021 with SRM-SECY-19-0095 – “Provide a notation paper with a full range of options for the scope of the rule on Enhanced Security of Special Nuclear Material and the potential regulatory, resource, and timing impacts of the options, per SRM.”

# Objectives for Developing Options

- Consider risk insights, operational oversight and inspection activities, and international guidance
- Improve consistency and clarity
- Where possible, enhance openness and transparency by moving security measures from non-public communications (e.g., security orders or license conditions) to publicly available regulations
- As appropriate use a risk-informed and performance-based structure

# Approach Used to Develop Options

- Stakeholder Engagement
  - Two public meetings in 2022
  - Briefing and breakout session at TRTR Annual Meeting in 2022
  - Three public meetings, and one closed meeting with cleared stakeholders in 2023
- Developed a full range of options to present to the Commission
  - Identified high-level topics and numerous options for each topic
  - Considered the current assessment of the threat to special nuclear material (SNM) possessed or anticipated to be possessed by licensees
  - Considered discussions from public meetings
- Used a risk-informed approach when considering options
  - Material attractiveness

# Material Attractiveness

- Risk-informed concept
  - The purer the material the more attractive it is to adversaries
  - Weight percent, not enrichment percent
- Dilution Factor
  - The weight of uranium-235, uranium-233 and plutonium divided by the total weight of the SNM material and non-SNM materials which are not mechanically separable from the SNM) for solids
- Three Levels
  - Non-dilute
  - Moderately dilute
  - Highly dilute

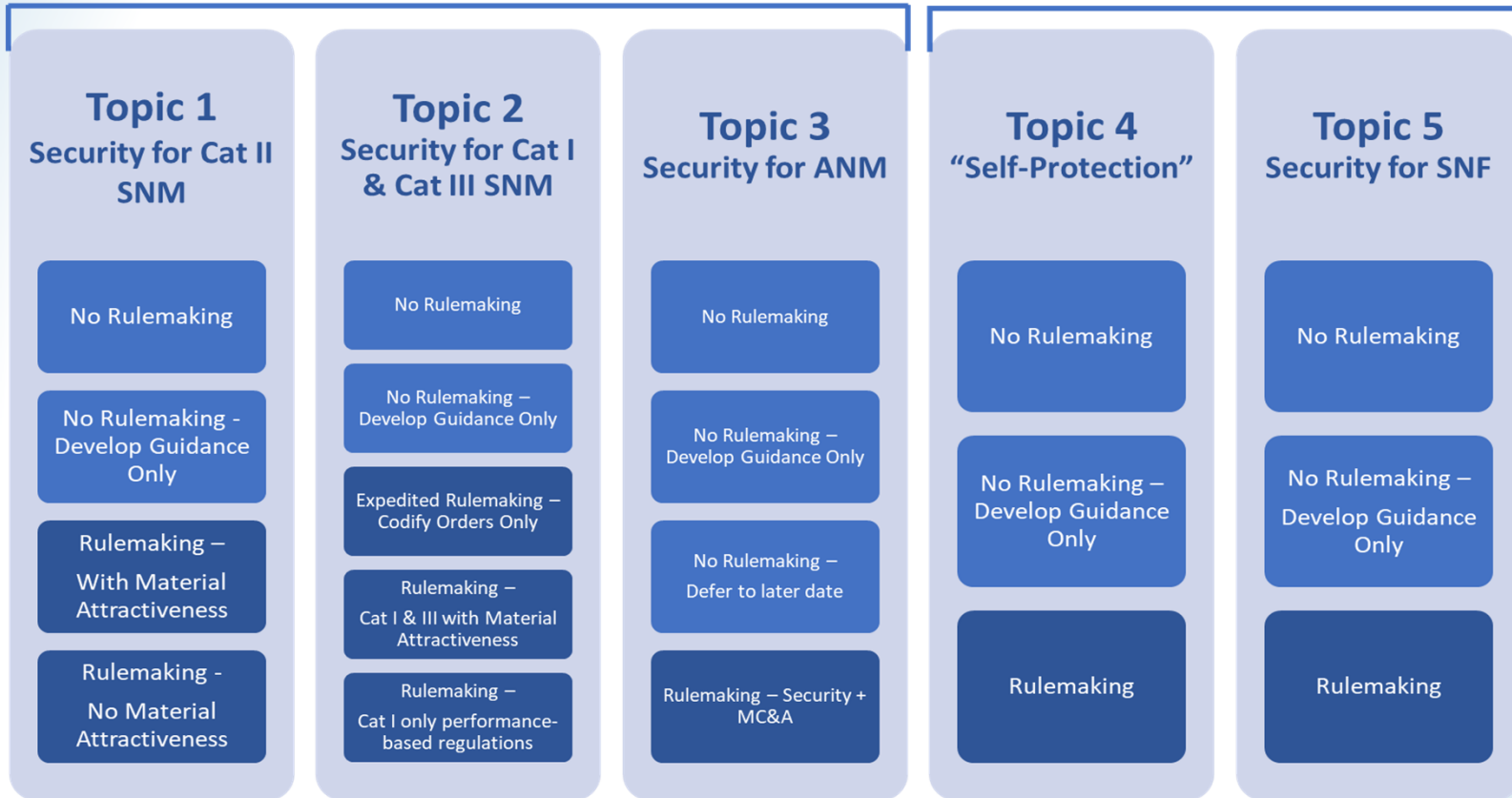
# Staff Considerations

- Would a revised regulation enhance applicants' and licensees' ability to implement a risk-informed, performance-based approach to the security of SNM?
- Would a revised regulation increase regulatory predictability and consistency for material possessed by current licensees and potentially by applicants?
- Do the options take into account the most recent internationally-accepted security guidance?

# Summary of Topics and Options

## Section One – Material Attractiveness

## Section Two – Spent Nuclear Fuel





# Summary

- All options, definitions, and security measures are pre-decisional and are subject to change
- Further opportunity for stakeholder review and input would occur if the Commission directs staff to move forward with rulemaking



# Questions