

Chair Christopher T. Hanson
Remarks for The Biden's Administration's New Strategy for
Countering Weapons of Mass Destruction Terrorism
March 2, 2023
(As prepared and not presented)

- Thank you, Dr. Moniz, and good morning, everyone.
- The NRC is an independent agency that licenses and regulates the Nation's civilian use of nuclear and radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment. We regulate commercial nuclear power plants, research reactors, and fuel cycle facilities. The NRC and the Agreement States oversee the peaceful use of radioactive materials.
- Agreement States are states that enter into an agreement with the NRC to assume regulatory authority over certain byproduct and source materials and certain quantities of special nuclear materials. The state government is responsible for licensing and oversight in the 39 states with those agreements.
- The NRC also licenses the import and export of radioactive materials and works closely with counterpart regulators around the world to enhance global nuclear safety and security.
- Our regulatory structure, programs, oversight, and inspection ensure that licensee security programs continually assess and address threats, sabotage, and thefts relating to special nuclear material, high-level radioactive waste, nuclear facilities, and other radioactive materials.
- The NRC continues to make significant efforts to address these threats and improve oversight for the protection of critical digital assets, including revision of our design basis threat regulations to ensure that nuclear power plants and other licensed facilities have consistent, effective security measures in place.
- We collaborate extensively with the Agreement States to maintain a strong regulatory framework that ensures the safety, security, and control of radioactive material. This includes regulations that ensure appropriate access to high-risk radioactive sources; secure storage of these sources; and effective detection, assessment, and response to any unauthorized access, as well as robust oversight and enforcement programs.
- In addition to these extensive activities, I chair the Radiation Source Protection and Security Task Force, which is composed of 14 Federal agencies plus the Organization of Agreement States observing. The Task Force evaluates the list of radioactive byproduct material sources that warrant enhanced security to ensure it remains adequate in light of the evolving threat environment.

- Throughout the development of this NSM, the NRC staff brought to the table its first-hand experience and knowledge of our domestic regulatory activities to ensure that the final product established a common ground to promote safe and secure nuclear and radiological material management policies and best practices.
- NRC is committed to working with key international regulatory partners, as well as our U.S. Government colleagues, to leverage our long-standing relationships and build on existing collaboration to advance nuclear and radioactive material security.
- Thank you.

Chair Christopher T. Hanson
Proposed Responses to Moderated Question(s)

The NRC works to ensure that its regulatory framework is agile and responsive to change, whether it be changes in technologies, threats, or other factors.

Reactors

- The future of the NRC’s regulatory framework for reactors is focused on applying performance-based, graded approaches to a range of security areas from physical security to cyber security.
- This provides regulatory stability, predictability, and clarity in the licensing process and minimizes or eliminates uncertainty for applicants who might otherwise request exemptions from the regulations.
- For example, the staff’s proposed Part 53 rule specifically incentivizes that safety and security be considered together in the design process such that, where possible, security issues are effectively resolved through design and engineered security features.

From the NRC Policy Statement for Advanced Reactors: The design of advanced reactors should:

- “include considerations for safety and security requirements together in the design process such that security issues (e.g., newly identified threats of terrorist attacks) can be effectively resolved through facility design and engineered security features and formulation of mitigation measures, with reduced reliance on human actions.”
(73 FR 60612; October 14, 2008)
- Staff has researched and identified that the designs and behavior in response to transients and accidents of many advanced reactors are anticipated to differ significantly from those of the large light water reactors (LWRs) in the current fleet. These advanced

reactor designs may warrant alternatives for meeting the existing physical security requirements to reflect the differences in their designs.

- Accordingly, staff has proposed an optional technology-inclusive regulatory framework (10 CFR Part 53) for use by applicants for new commercial advanced nuclear reactors. In the proposed 10 CFR Part 53, the staff has proposed alternative requirements commensurate with the risks posed by the advanced reactor technology. These proposed amendments to the regulations would offer voluntary performance-based alternatives for meeting certain physical security requirements for advanced reactors.
- The draft proposed rule would maintain requirements on securing nuclear materials and establish performance-based and consequence-based approaches for physical protection against radiological sabotage, cybersecurity, access authorization, and fitness-for-duty that would afford Part 53 licensees additional flexibility in establishing these security programs.
- This provides regulatory stability, predictability, and clarity in the licensing process and minimizes or eliminates uncertainty for applicants who might otherwise request exemptions from the regulations.
- Proposed Part 53 specifically considers security in the design phase:

§ 53.440 Design requirements.

(d) Safety and security must be considered together in the design process such that, where possible, security issues are effectively resolved through design and engineered security features.

Fuel Cycle

- We are also evaluating potential changes to the regulations related to security for special nuclear material (SNM) to provide more regulatory stability, predictability, and clarity.
- The combination of the risk insights and changes in the types of facilities and materials are considered when determining whether the framework needs to be changed or updated.
- Example – Enhanced Security for SNM. This effort is using a more risk-informed material attractiveness approach in the grading of physical protection requirements for fixed sites and transportation of SNM to focus physical protection on the material itself, as opposed to on the facility that possessed it, thereby promoting a consistent level of protection regardless of its location.

- We are also evaluating potential changes to the regulations related to security for special nuclear material (SNM) to provide more regulatory stability, predictability, and clarity.
- The combination of the risk insights and changes in the types of facilities and materials being regulated by the NRC since 1979, when the NRC's current regulations for physical protection of SNM were revised has led the staff to consider the benefits of using a more risk-informed "material attractiveness" approach for SNM in the grading of physical protection requirements for fixed sites and transportation. Considering material attractiveness in the determination of appropriate requirements would enable the "rightsizing" of already graded physical protection regulations that are specific to quantities of various forms and concentrations of SNM. This approach would also focus physical protection on the material itself, as opposed to on the facility that possessed it, thereby promoting a consistent level of protection regardless of its location.

Materials Security

- In the area of materials security, the NRC and Agreement States have established a strong regulatory framework to ensure the safety, security, and control of radioactive material and engage in extensive interagency coordination to ensure a strong national infrastructure for radioactive source management and protection.
- The combination of performance-based and prescriptive requirements is appropriate given the threat environment and the risk associated with the material. For risk significant radioactive materials, NRC applies a multilayered approach, including: background checks; access controls; license verification (to prevent fraudulent or counterfeit licenses); security barriers; ability to detect, assess and respond to events; and coordination with law enforcement. The NRC continues to evaluate the regulatory framework and is planning to further enhance security of radioactive materials.
- Example – RSSA Rule. This rule aims to improve security by requiring applicants to demonstrate that they will use the requested byproduct, source, or special nuclear materials for the purposes stated in their license applications.
- In the area of radioactive byproduct materials security, multiple federal agencies collaborate to provide the overall infrastructure to protect against malicious uses of these materials.
- The Nuclear Regulatory Commission just recently led the production of the 2022 Radiation Source Protection and Security Task Force Report. This report—produced every 4 years—involves input and analysis of over a dozen of other federal entities and our Agreement State regulatory partners. The task force again concluded that there were no significant gaps in the area of radioactive source protection and security that are not already being addressed through continued attention from appropriate Task Force agencies.

- The Nuclear Regulatory Commission plays a central role in radioactive materials security as the independent federal safety and security regulatory authority and lead for the National Materials Program.
- Following the events of September 11, 2001, the Commission revisited its security requirements and, with respect to materials security, established a robust, risk-informed regulatory infrastructure for radioactive materials. Our physical protection requirements (*contained in 10 CFR 37*) for Category 1 and 2 materials—the most risk-significant categories of radioactive materials—have been successfully applied to users of this material over the last decade and have proved highly effective, as evidenced by the positive operational experience that we have seen in this area.
- Although our track record has been positive, because of the evolving nature of the threat, we cannot assume that we will never need to evolve our regulations or processes. We routinely evaluate changes in the threat environment and availability of new technology to identify opportunities to enhance our regulatory infrastructure. And while we are always focused on maintaining adequate protection of these materials, we also need to ensure that our regulatory processes are both effective and efficient so that we do not present an unreasonable burden to licensees such that these materials remain reasonably accessible for essential commercial, industrial, and medical uses.
- Along those lines, we are currently conducting an accelerated rulemaking to revise the radioactive source security and accountability regulations to further ensure the validity of license applicants. The proposed requirements would 1) require licensees transferring category 3 quantities of radioactive material to verify licenses to confirm that the recipient is authorized to receive the type, form, and quantity of radioactive material to be transferred; 2) require that applicants have safety and security equipment in place before granting a license for an unknown entity; and 3) clarify license verification methods for transfers involving radioactive material that are below category 2 thresholds.
- The staff accelerated the development of the proposed rule because the scope and objectives were clearly defined and did not require any additional outreach or research to develop the regulatory basis. The acceleration also responds promptly to Commission direction and recent recommendations in U.S. Government Accountability Office (GAO) reports.
- NRC staff has worked closely with our Agreement State partners on the rulemaking working group. The proposed rule was provided to the Commission in December 2022; the Commission is currently reviewing the staff's proposal and will provide the staff direction on the next steps for this activity.

International Cooperation

- The NRC works closely with our international regulatory counterparts to share information and good practices as we face similar challenges and opportunities.
- As countries with established nuclear power programs work to determine how to adapt their regulatory oversight to include advanced technologies, the NRC is strengthening its cooperation with the regulators in those countries to ensure we can all benefit from our collective efforts.
- In addition, the NRC has a well-established capacity building program that provides regulatory assistance to countries considering new nuclear power programs, both existing and new technologies. We strongly support U.S. Government efforts to strengthen nuclear safety and security worldwide.

And of course, as we discussed earlier, the NRC is working hard to address potential complexities in the regulatory environment that may arise as a result of new technologies.

- The regulatory requirements developed in Part 53 would use methods of evaluation, including risk-informed and performance-based methods, that are flexible and practicable for application to a variety of advanced reactor technologies.
- The NRC is proposing a limited-scope rulemaking that would provide a clear set of alternative, performance-based requirements and guidance for advanced reactor physical security that would reduce the need for exemptions to current physical security requirements when applicants request permits and licenses. This rulemaking would provide additional benefits for advanced reactor applicants by establishing greater regulatory stability, predictability, and clarity in the licensing process.
- These requirements are intended to ensure that the proposed new regulations provide a level of safety comparable to that required by the existing regulations.