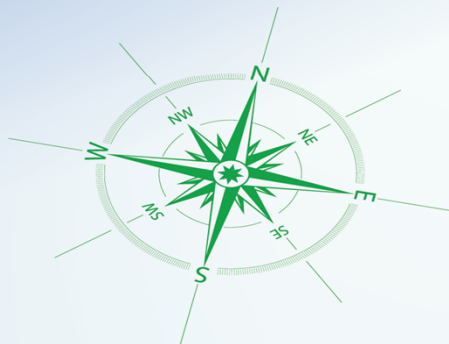


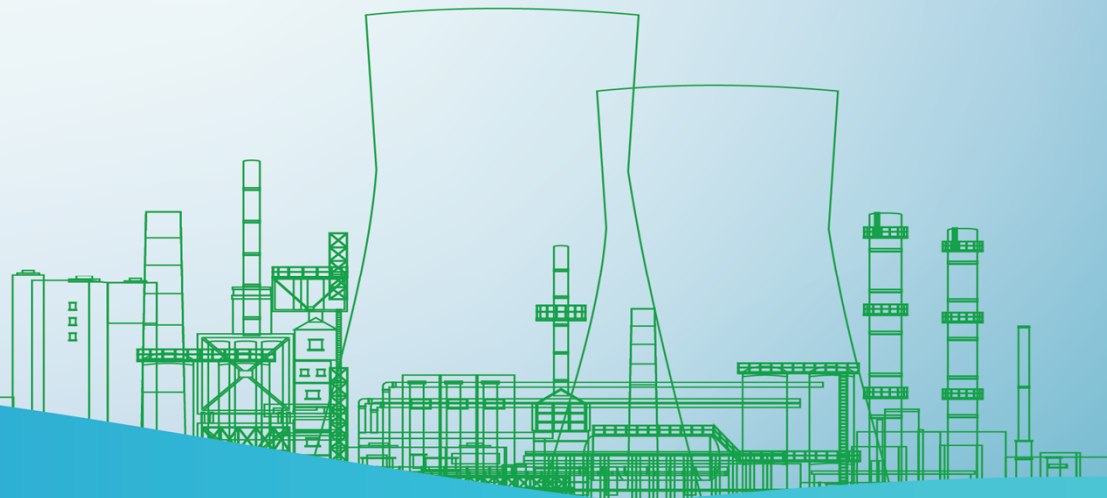
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35th Annual Regulatory Information Conference



NAVIGATING ^{the} NUCLEAR FUTURE

MARCH 14-16, 2023

Bethesda North Marriott Hotel
and Conference Center
Rockville, Maryland

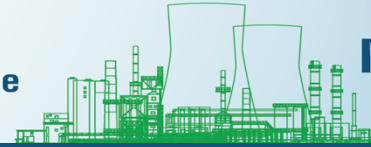


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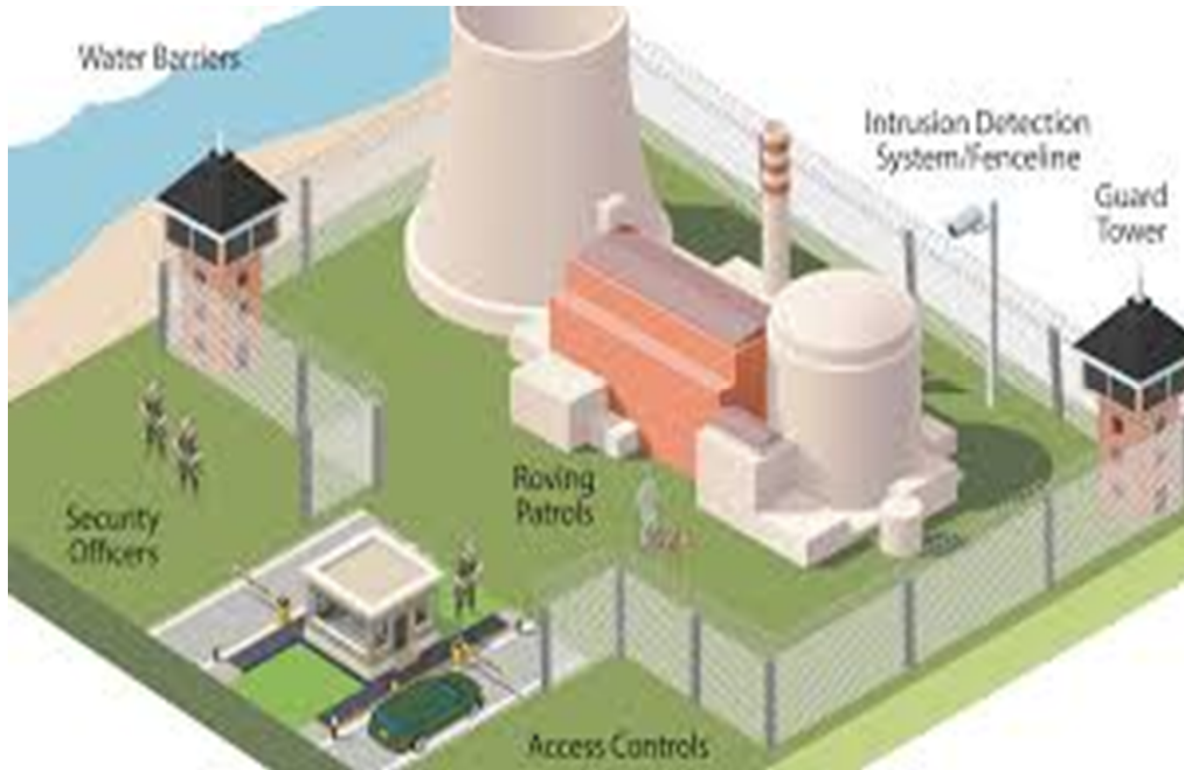
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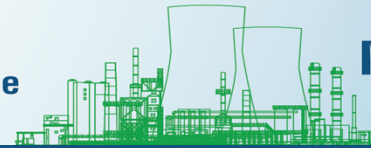
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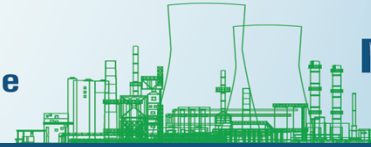
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Overview

- Opening Remarks
- Introductions
- Security Initiatives—Implementation and Rulemaking
- Innovative Approaches—Design and Industry



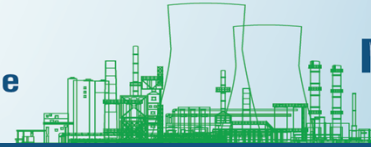
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Introductions

- Greg Bowman, Director, Division of Physical and Cyber Security Policy, NRC
- Stacy Prasad, Senior Security Risk Analyst, Reactor Security Branch, NRC
- Tony Qualantone, Security and Safeguards Engineering Manager, X-energy
- JR Russell, Nuclear Energy Safety and Security, Sandia National Laboratories
- Rani Franovich, Senior Policy Advisor, The Breakthrough Institute
- Margaret Ellenson, Safeguards and Security Manager, Kairos Power LLC





Security Initiatives at the NRC

- Developing adaptive and risk-informed regulations
- Amending the prescriptive nature of the existing security framework while maintaining a commensurate level of protection for public health and safety, the common defense and security, and the environment



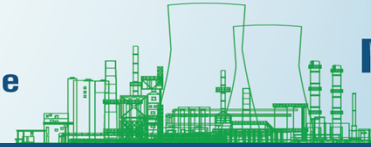


Protection and Bounding Times

Concepts that recognize existing layers of protection, both safety and security, that support the licensee's continued defense against threats up to and including the design-basis threat.

- After the protection or bounding time is reached, there is a reduced risk profile, and licensees can reasonably expect to have additional resources available, such as law enforcement and/or recalled off-duty personnel, to provide support to continue to defend against the design-basis threat.



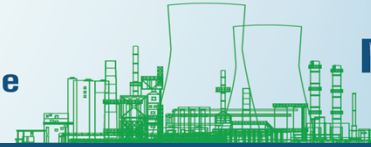


Protection and Bounding Times

Advantages of protection and bounding times:

- Enable licensees to refine protective strategies to focus on the most risk-significant target sets while continuing to maintain physical protection of the site.
- Ensure licensees will continue to protect all front-line and supporting systems whose prompt functional failure could result in significant core damage before a protection or bounding time is reached.

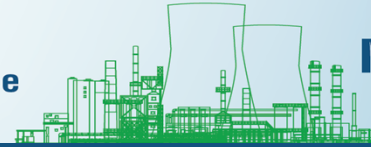




Examples of Protection and Bounding Times

- Reasonable Assurance of Protection Time
 - The time that a licensee's physical protection program independently defends against the design-basis threat in order to demonstrate reasonable assurance.
- Security Bounding Time
 - The time that would be needed, following the initiation of a hostile action at a nuclear power reactor, for adversary interference to be precluded and for operators to complete actions that would prevent significant offsite release of radionuclides.





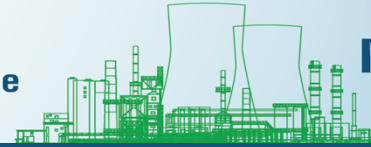
Limited-Scope Rulemaking*

Radiological consequence-based criteria to consider implementation of alternatives to certain existing prescriptive requirements, including the following:

- minimum number of onsite armed responders
- reliance on law enforcement or other offsite armed responders to fulfill interdiction and neutralization functions
- use of means other than physical barriers to accomplish delay and access control functions
- location of the secondary alarm station
- designation of vital areas for the secondary alarm station and its secondary power supply

** This staff-proposed rulemaking has been documented in SECY-22-0072 and is with the Commission for review. More information on the rulemaking process is available at <https://www.nrc.gov/about-nrc/regulatory/rulemaking/rulemaking-process.html>.*





10 CFR Part 53 Rulemaking*

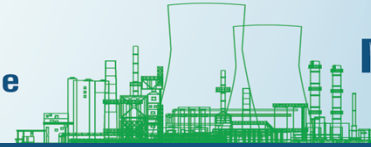
Performance-based regulation alternative for increased flexibility and the use of practicable approaches for the protection of a variety of advanced reactor technologies.

Security and safeguards programs addressed by 10 CFR Part 53—

- information security
- physical security
- cybersecurity
- access authorization
- material control and accounting

** This staff-proposed rulemaking has been documented in a SECY and is with the Commission for review. More information on the rulemaking process is available at <https://www.nrc.gov/about-nrc/regulatory/rulemaking/rulemaking-process.html>.*

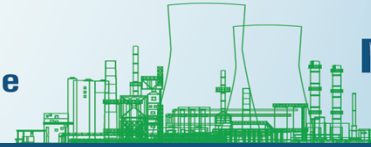




Innovative Approaches

- Engaging in collective efforts among stakeholders to consider innovative approaches and advanced technologies to meet physical security requirements
- Identifying opportunities to incorporate security into the design process early
- Encouraging early engagement by any applicant or licensee that is considering the use of new and emerging technologies

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