



# RIC 2011 Security – Kinetic Change

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## Remotely Operated Weapons Systems

Discussion Topics:

Technology

NRC's Licensing  
process for ROWS



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## Technology

- Interdiction and denial system
- Platform typically mounted in a static position (building)
- Cameras are used as the weapon sighting system (area, day scope, and night vision)
- Slewing software typically used for tracking purposes



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## Technology

- Supervisor approval required to activate and/or ability to disable the system
- Removes the weapon operator from the direct line of fire
- Hard-wired on a closed system



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## Interagency Agreement

- In 2007, the NRC staff joined the interagency ROWS (IROWS) working group
- Developed Safety standards for common system specifications with ROWS manufacturers
  - Functional and performance requirements
  - Testing and verification of system
  - Key performance parameters (safety/security software)

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## Interagency Agreement

- DOE Standard:
  - DOE-STD-1047-2008 Safety Function and Other Features of Remotely Operated Weapons Systems



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## Licensing

- To License ROWS the NRC Evaluates:
  - Safety
  - Design
  - Installation
  - Testing & Maintenance
  - Training
  - Operations and Special Conditions
- The current regulatory framework is adequate to license ROWS.
  - (NUREG-0800, SRP, Section 13.6.1 Physical Security)

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## Licensing

- Security Plans (10 CFR 73.55(c))
- Physical Protection Program Design/Defense-in-Depth (10 CFR 73.55(b))
- Maintenance, Testing, and Calibration (10 CFR 73.55(n))
- Training and Qualification (Appendix B to Part 73, Section VI.)
- Cyber Security (10 CFR 73.54)
- Safety / Security Interface (10 CFR 73.58)

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## Licensing

- **Use of Force for ROWS**
  - Individual State Laws
  - 10 CFR 73.55 (k)(3)
  - Site's Physical Security Plan
  - Site's Firearms Policy based on a Use of Force Continuum
  - NRC Information Notice 89-05  
 "Use of Deadly Force by Guards Protecting Nuclear Power Reactors Against Radiological Sabotage"

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## Conclusion

- Additional Power Reactor Licensees expected to use ROWS in the near future
  
- The near-term development and publication of guidance explicit to the deployment and use of ROWS
  
- Continue involvement and communications with interagency and licensees

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