



Risk Informing Security

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Can We Risk Inform Security?

- Unlike safety initiating events, security initiating events are not random
- Difficult to assess the likelihood of an event that is initiated non-randomly
- We do not have an answer for how much security is enough, or how effective a security system must be

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Numerous Workshops

- NRC Sandia Workshop - 2010
- INMM Workshop on Risk Informing Security – February 2014
- INMM Reducing Risk Workshop – March 2015
- ANS/INMM Workshop on Safety/Security Risk – April 2015
- INMM Workshop in VA Tools – September 2015

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NRC Sandia Workshop 2010

- Six Areas of Opportunity Identified
 - Uncertainty of initiating events
 - Simulation tools
 - Collaboration between safety/security
 - Cyber Security
 - Improved metrics
 - Demonstration project like WASH 1400

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INMM Workshop on Risk Informing Security

- Feb 2014 in Stone Mountain, GA
- Safety/Security risk approaches
- Material attractiveness
- Likelihood of event
- VA simulation tools
- Cyber Security

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INMM Reducing Risk Workshop

- March 2015 in Washington, DC
- Session on Cyber Security
- Perception of risk
- Insider mitigation

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ANS/INMM Workshop on Safety/Security Risk

- April 2015 in Sun Valley, Idaho
- Engaged safety and security risk professionals in a discussion of risk applied to their discipline
- Safety/Security Interface
- Likelihood of Event

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INMM Workshop on VA Tools

- September 2015 in Boston
- Overview of VA Tools
- Discussion of experiences using tools
- Discussion of how these tools could be used in the regulatory process

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Current Activities

- Use of Simulation Modeling
- Material Attractiveness
- Cyber Security
- NUSAM

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Use of Simulation Modeling

- Numerous licensees have begun to use modeling and simulation tools
- NRC has received 50.54(p) submissions supported by the tools
- NRC has begun staff training
- NRC staff assessing how to best review submissions supported by such analysis

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Material Attractiveness

- Development of an approach to grade security based on the attractiveness of the nuclear material to the adversary
- Approach allows alternative measures to be applied for varying levels of dilution
- Will apply to fuel cycle facilities and RTRs

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Cyber Security

- Reactor cyber security implementation under way
- Highest consequence critical digital assets (CDAs) addressed using a consequence based approach to consider lesser requirements for CDAs with lower consequences

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NUSAM

- IAEA Coordinated Research Project
- Develop guidance on the conduct of security assessments
- Case Studies
 - NPP
 - Irradiator Facility
 - Rad Material Transport
 - LEU Fuel Fabrication Facility
 - Spent Fuel Storage Facility

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Questions ?

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