Guidance Development on Computer Security for Other Radioactive Material

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Information and Computer Security Programme of Activities

1. Guidance Development
2. Conduct of Training and Capacity Building Activities
3. Enabling Information Exchange
4. Coordinated Research Activities
5. Support for National and International Exercises
6. Outreach and Engagement

IAEA Nuclear Security Series

IAEA

Fundamentals (PRINCIPLES) – NSS20
- Objectives and principles
- Basis for Nuclear Security Recommendations
- Essentials from international instruments

Recommendations (WHAT) – NSS 13, 14, 15
- General approaches, actions, concepts and strategies
- Applications of Fundamentals

Implementing Guides (HOW)
- Broad guides on how Recommendations to be applied

Technical Guidance (DETAILS)
- Reference Manuals, Training Guides, Service Guides

NSS - Assists in the implementation of obligations contained in international legal instruments relevant to nuclear security

Information and Computer Security for Nuclear Security
IAEA Publications: Nuclear Security Series Documents & Others

NSS 20 Objective and essential of a State's nuclear security regime

NSS Recommendations

NSS 13 Nuclear Material and Nuclear Facilities	NSS 14 Radioactive Material and Associated Facilities	NSS 15 Nuclear and other Radioactive MORC

NSS Computer Security Implementing Guides

NSS 23-G - Security of Nuclear Information

NST045 (2018)
Computer Security for Nuclear Security

NSS Computer Security Technical Guides

NSS 17 Computer Security Nuclear Facilities (2011)

Application in Grade Approach

NST047 (2018 est)
Computer Security Techniques for Nuclear Facilities

Application in Grade Approach

NSS 33-T (2018) Computer Security for I&C Systems at Nuclear Facilities

Application in Grade Approach

Development and Implementation of Computer Security Regulation for Nuclear Security Regimes

Documents Outside Nuclear Security Series

Conducting Computer Security Assessments (IAEA-TDL-006)

Incident Response Planning for Computer Security Events (IAEA-TDL-005)

Reducing Cyber Risks in the Nuclear Industry Supply Chain

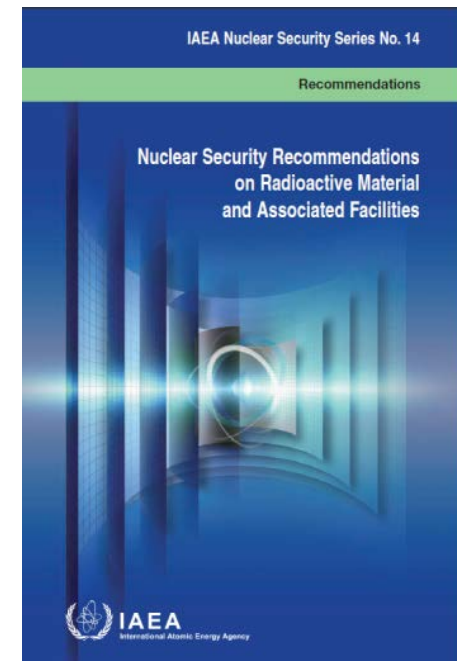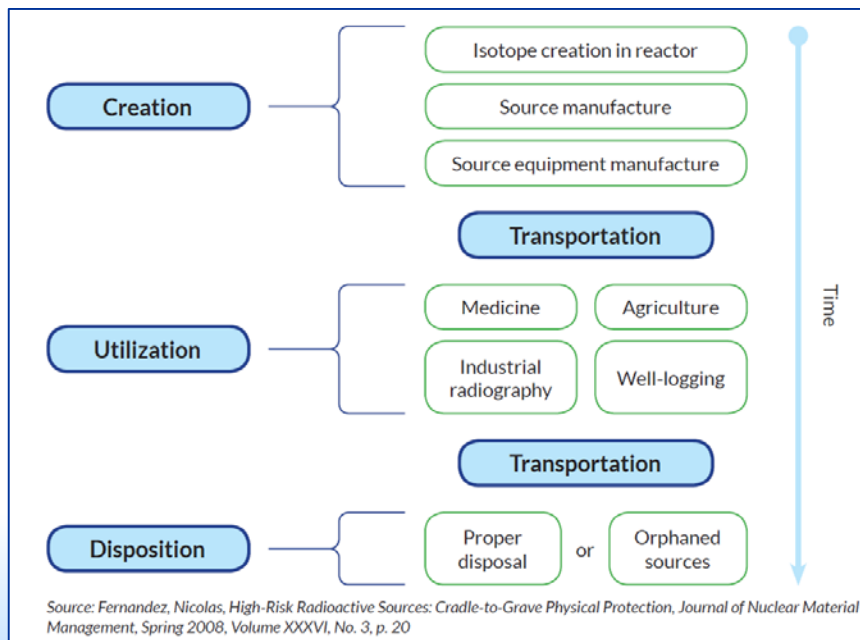Computer Security Considerations for Physical Protection Systems

Computer Security Considerations for Detection and Response Architectures (NSS15)

Conducting Computer Security Exercises for Nuclear Security

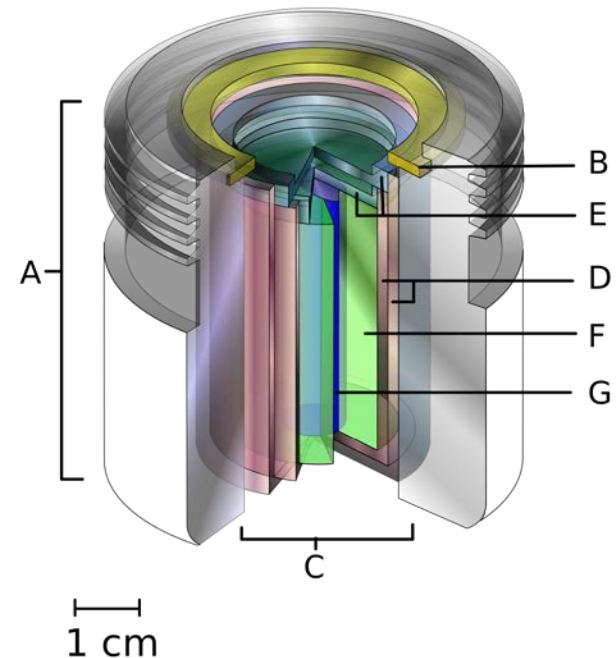Activities Involving Radioactive Material and Associated Facilities

Protection of Radioactive Material (NSS14)

- – Computers are a part of each step in the lifecycle of radioactive materials
- – Security measures are needed to prevent acquisition of radioactive material and sabotage of associated equipment

Source: Fernandez, Nicolas, High-Risk Radioactive Sources: Cradle-to-Grave Physical Protection, Journal of Nuclear Material Management, Spring 2008, Volume XXXVI, No. 3, p. 20

IAEA Nuclear Security Series No. 14

Recommendations

Nuclear Security Recommendations on Radioactive Material and Associated Facilities

Application in Graded Approach for NSS14

- Held two Consultancy Meetings, March & June 2019 to review:
  - Reviewed existing IAEA guidance, Other radioactive material security, and International and National standards.

- The experts recommended that development of a non-serial publication was needed for other radioactive material.

- Developed the document structure covering:
  - NSS Guidance
  - Program, elements, goals, and targets
  - Sample National and Organizational CSP elements

- Working text was proposed for all sections

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Concepts Guiding Development

- Respect the diversity facilities and activities that use, control, or store other radioactive material.
- Support adoption by different levels of computer security capacity.
- Focus on security for digital assets that if compromised could contribute to theft or sabotage.
- Provide guidance illustrated with examples to be approachable and accessible in support of broad community adoption.
- Align with the scope and terminology of the draft NSS 11-G.
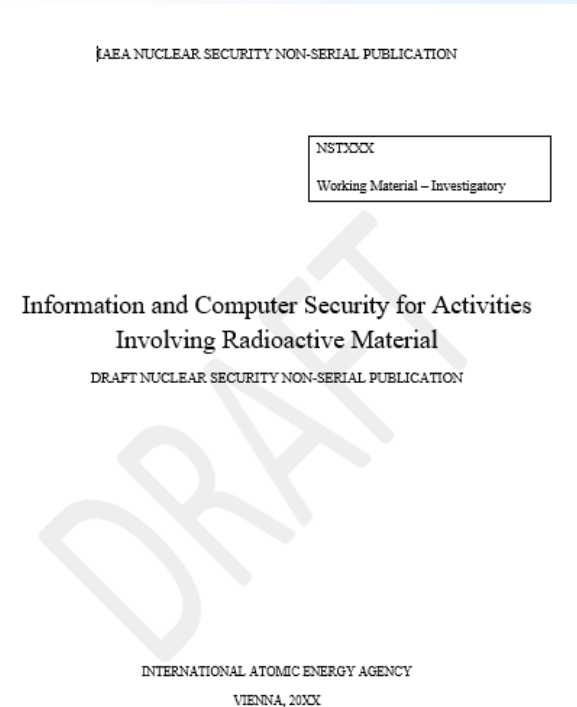
Current Table of Contents

I. Introduction

II. Challenges for Security of Other Radioactive Material

III. General Considerations for Information and Computer Security (NSS documents)

IV. Threats, Targets, and Risks to Other Radioactive Material Associated

V. Systems Design Consideration for Protection for Compromise

VI. Computer Security Programme (ISMS)

VII. Maturity Model for Computer Security Measures

VIII. Sustaining Computer Security

Future Guidance Development Activities

- A Document Preparation Profile and 89 pages of draft working material have so far been produced.
- INMA is currently planning another two meetings to work on the development of the guidance:
  - 18-22 Nov 2019 – Meeting to finalize draft on publication on computer security of other radioactive material
  - 16-20 March 2020 – Review Drafts of non-serial publication for publishing
- We would welcome additional expert contributions.

IAEA NUCLEAR SECURITY NON-SERIAL PUBLICATION

NSTXXX

Working Material – Investigatory

Information and Computer Security for Activities Involving Radioactive Material

DRAFT NUCLEAR SECURITY NON-SERIAL PUBLICATION

DRAFT

INTERNATIONAL ATOMIC ENERGY AGENCY

VIENNA, 20XX

Upcoming Events

Training/Capacity Building

- International Training Course for Protecting Computer Based Systems in Nuclear Security Regimes
(Daejeon, November 2019)

- Three Regional Training Courses

  - Computer Security Fundamentals for Nuclear Security in Spanish (Argentina, August 2019)

  - Computer Security Incident Response course (Australia, March 2020)

 - Conducting Computer Security Assessments Course (Russia, June 2020)

Information Exchange

- Technical Meeting on Computer Security Approaches and Applications in Nuclear Security (Berlin, September 2019)

Guidance Development

- Consultancy meetings to develop guidance documents for:

  - Computer Security in the Nuclear Supply Chain
  - Conducting Computer Security Exercises for Nuclear Security
  - Computer Security Guidance for Activities involving Radioactive Sources
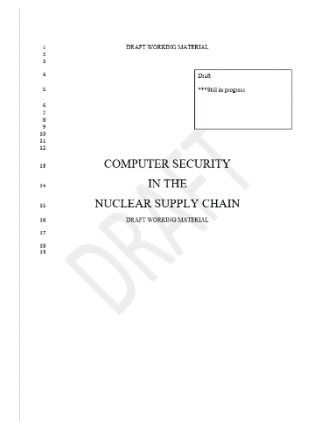
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Atoms for Peace and Development

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Thank you!