

The Status of the NC Increased Security Control Program

The NCHPS / Oct. 18, 2007

By: NCRPS - Radioactive Material Branch



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Outline:

- Brief History
- Present
 - 1st Round of Inspections
 - Outcomes
 - 2nd Round of Inspections
 - Expectations / Challenges
 - Recommendations
- Future
- Questions



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History Review:

Brief History

- After 9/11, the NRC immediately began issuing Advisories to certain NRC and Agreement State licensees to enhance security. These Advisories instructed licensees to add additional controls:
 - Installation of additional physical barriers
 - Enhanced coordination with law enforcement
 - More restrictive site access controls

Increased Controls
NCHPS Chapter Meeting
March 23, 2006
W. Lee Cox, III, RAM Manager



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History Review:

Brief History

- The Advisories were followed up by Orders with similar requirements
- Panoramic Irradiators greater than 10k Ci
 - June 2003
- Manufacturers and Distributors
 - January 2004

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History Review:

Brief History

- During the summer of 2005, the NRC and States developed a Transition Plan to address the issuance of “Increased Controls” for an additional 2000 licensees – Health and Safety
- The Increased Controls were issued by all Agreement States and the NRC between September 2 – December 2, 2005

Increased Controls
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History Review:

Applicability of Increased Controls

- The Increased Controls were issued based on possession limit authorization
 - Issued for licenses which authorize possession at or above Table 1 values
 - Some licenses have open ended authorizations
- Licensee Implementation of the Increased Controls is based on possession

Some licensees missed this opportunity.

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History Review:

Radionuclide	Quantity (curies)	Radionuclide	Quantity (curies)
Am-241	16	Pm-147	11,000
Am-241:Be	16	Pu-238	16
Cf-252	5.4	Pu-239:Be	16
Cm-244	14	Se-75	54
Co-60	8.1	Sr-90 (Y-90)	270
Cs-137	27	Tm-170	5,400
Gd-153	270	Yb-169	81
Ir-192	22		



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Present Status:

- Current IC License Distribution
- 1st Round of Inspections
- 2nd Round of Inspections



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1st Round Inspection Outcomes

**NRC INFORMATION NOTICE 2007-16 (05/11/07):
Common Violations of the Increased Controls
Requirements and Related Guidance Documents**

“A review of common violations identified during initial inspection of licensees’ IC programs indicated that licensees may not have completely understood the IC requirements or fully reviewed the guidance documents.”



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Implementation Challenges:

The increased controls are a matter of compatibility with NRC and must be implemented in a time frame desired by the NRC and with essentially identical content to those being used by NRC for its licensees.

The intent and objective of the increased controls is to enhance existing security and control requirements to reduce the risk of malevolent use of radioactive material quantities of concern. The increased controls cannot prevent 100% of all attempts at theft, sabotage or diversion; however, in total, the increased controls provide multiple layers of control, or a “defense in depth,” that are designed to provide enhancements to mitigate the risk of malevolent uses.

Questions and Answers Regarding Increased Controls (IC) and Implementation for Licensees That Possess Radioactive Material Quantities of Concern



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Implementation Challenges:

The cost of implementing increased controls was considered during the drafting process. The NRC and Agreement States considered effectiveness, the potential burden on licensees, and costs required of licensees to comply with the increased controls. The increased controls allow for substantial flexibility in meeting the objectives so that licensees can tailor measures to their own specific programs and operations. With appropriate enhancements, existing security, safety, and business practices can adequately address the requirements of the increased controls. Also, the bases for the increased controls are very similar to the requirements of other agencies (e.g., select agent, hazardous material, or explosive material security requirements), which many licensees are already implementing.

Questions and Answers Regarding Increased Controls (IC) and Implementation for Licensees That Possess Radioactive Material Quantities of Concern



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Implementation Challenges:

“The adequacy of a licensee’s method to comply with increased controls can only be determined during an on-site inspection.”

Questions and Answers Regarding Increased Controls (IC) and Implementation for Licensees That Possess Radioactive Material Quantities of Concern (#87)



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Implementation Challenges:

The increased controls are **purposely not prescriptive** in order to allow licensees to tailor programs to their specific facility and operations. Various approaches are available to licensees to meet the objectives of the increased controls, and that **there exists no one solution for all licensees.**

Questions and Answers Regarding Increased Controls (IC) and Implementation for Licensees That Possess Radioactive Material Quantities of Concern



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Implementation Tool Kit:

North Carolina Department of Environment and Natural Resources

Radioactive Materials Branch

INCREASED CONTROLS (IC) "TOOLBOX"

Information for Licensees who must implement the IC requirements

[NEW Info.](#) [IC Home](#) [E-mail a question](#) [RMB Home](#)

This material is intended for NC Radioactive Material Licensees required to demonstrate compliance with the N.C. Regulations for Protection Against Radiation, the N.C. General Statutes, and the conditions of their specific licenses regarding increased controls for certain radioactive materials in certain quantities.

This guidance is not intended to, and does not, create any rights or privileges, substantive or procedural, which are enforceable by person. The publication of this guide, or any version thereof, does not place any limitation of the otherwise lawful prerogatives or discretion of the Division of Environmental Health, Radiation Protection Section. Use of the guidance, recommendations, and tools associated with this material is not mandated or required in any way. Any consideration or use is voluntary on the licensee's part. While it is hoped the material is useful to the licensee in achieving and maintaining compliance, consideration or use by the licensee has inherent effect on compliance status.

The purpose of this material is to enhance the licensee's ability to efficiently and effectively -

- implement controls intended to further the security of certain types and quantities of radioactive material,
- determine an implementation method which demonstrates compliance with the specified requirements,
- document a "comprehensive program" intended to comply with specified requirements, and
- interact with the NC Radiation Protection Section in matters related to compliance with the specified requirements.

An intended outcome is that licensees can incrementally "build" a cumulative and comprehensive IC Compliance Program through the use of the following documents – Increased Security Controls Evaluation Tool, Increased Security Controls Evaluation Tool Worksheet, and Increased Security Controls Evaluation Tool Guidance. An example of a completed Increased Security Control Evaluation Tool Worksheet for a *single* IC Compliance Program element is available.

The diversity of licensee organizations (size, type, and structure) affected requires that any guidance be general in nature and adaptable to their varied needs. Licensees are encouraged to consider adapting the materials to their specific needs in order to achieve the above listed outcomes.

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REVIEW AND BE FAMILIAR WITH THESE DOCUMENTS

FORMAT

- [Increased Controls for Licensees that Possess Sources Containing Radioactive Material Quantities of Concern \(The "IC"\)](#)
- [Questions and Answers \(Q&As\) Regarding Increased Controls \(IC\) and Implementation for Licensees That Possess Sources Containing Radioactive Material Quantities Of Concern](#)
- [Supplemental Questions and Answers \(Sup. Q&As\)](#)
- [Implementing Guidance for Licensees that Possess Radioactive Material Quantities Of Concern \(this document contains a useful definitions page\)](#)
- [Table of Radionuclides of Concern](#)
- [U.S. Nuclear Regulatory Commission Implementation Plan for the Radiation Source Protection and Security Task Force Report **EXIT**](#)
- [Increased Security Controls Evaluation Tool Guidance](#)
- [Increased Security Controls Evaluation Tool](#)
- [Increased Security Controls Evaluation Tool Worksheet](#)
- [Increased Security Controls Evaluation Tool Worksheet \(completed for a **SINGLE** program element\)](#)

[IC Home](#) [NEW Info.](#) [E-mail a question](#) [RMB Home](#)

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<http://ncradiation.net/rms/rmsichome.htm>



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1st Round Outcomes



1st Round Outcomes



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Present Status:

2nd Round of Inspections

- 2007 / 2008
- Frequency
- Method
- Expectations
- Recommendations



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IC Inspection Frequency:

- **Limited federal guidance to date**
 - option for “Priority Based Frequency”
- **Current NC strategy is all IC licensees are priority**
 - standard frequency of 12 months
 - 18 months to be “over-due”

“As Agency Determined” for:

- new IC licensees
- revised licenses
- compliance challenged licensees
- management discretion

2nd Round of Inspections:

- Underway
- May be unannounced (typically courtesy notification given)
 - Same authority as H&S inspections
- All elements of IC-1 through IC-6 fair game
- Scope and duration is dependent on licensee
 - Scope and sophistication of operations
 - Numbers and types of sources
 - Inspection History
- Standard format of reporting and enforcement
 - RSO point of contact
- Field work inspections likely



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NOTICE

The U.S. Nuclear Regulatory Commission (NRC) has tasked their staff with developing a plan, in conjunction with the Agreement States, to begin fingerprinting and criminal history record checks for all persons that have access to radioactive materials in Quantities of Concern (i.e., those that are currently determined to be Trustworthy and Reliable pursuant to the Increased Controls). This direction responds to Section 652 of the Energy Policy Act of 2005, which was incorporated into the Atomic Energy Act in Section 149 (<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0980/rev1/vol-1-sec-1.pdf>).



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New Finger Print Requirement:

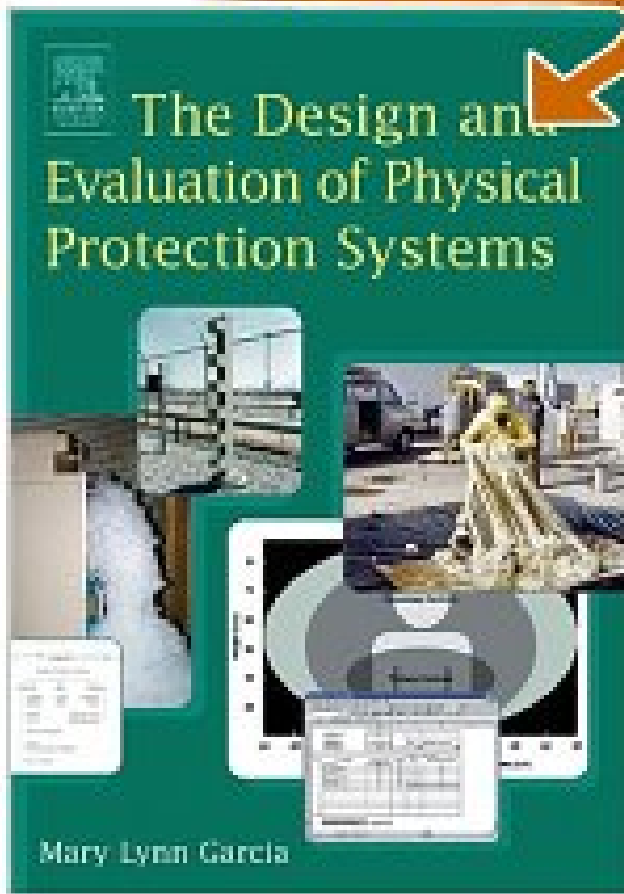


“In Process”

- Will most likely follow same roll-out as original orders.

Reference Material:

SEARCH INSIDE!TM



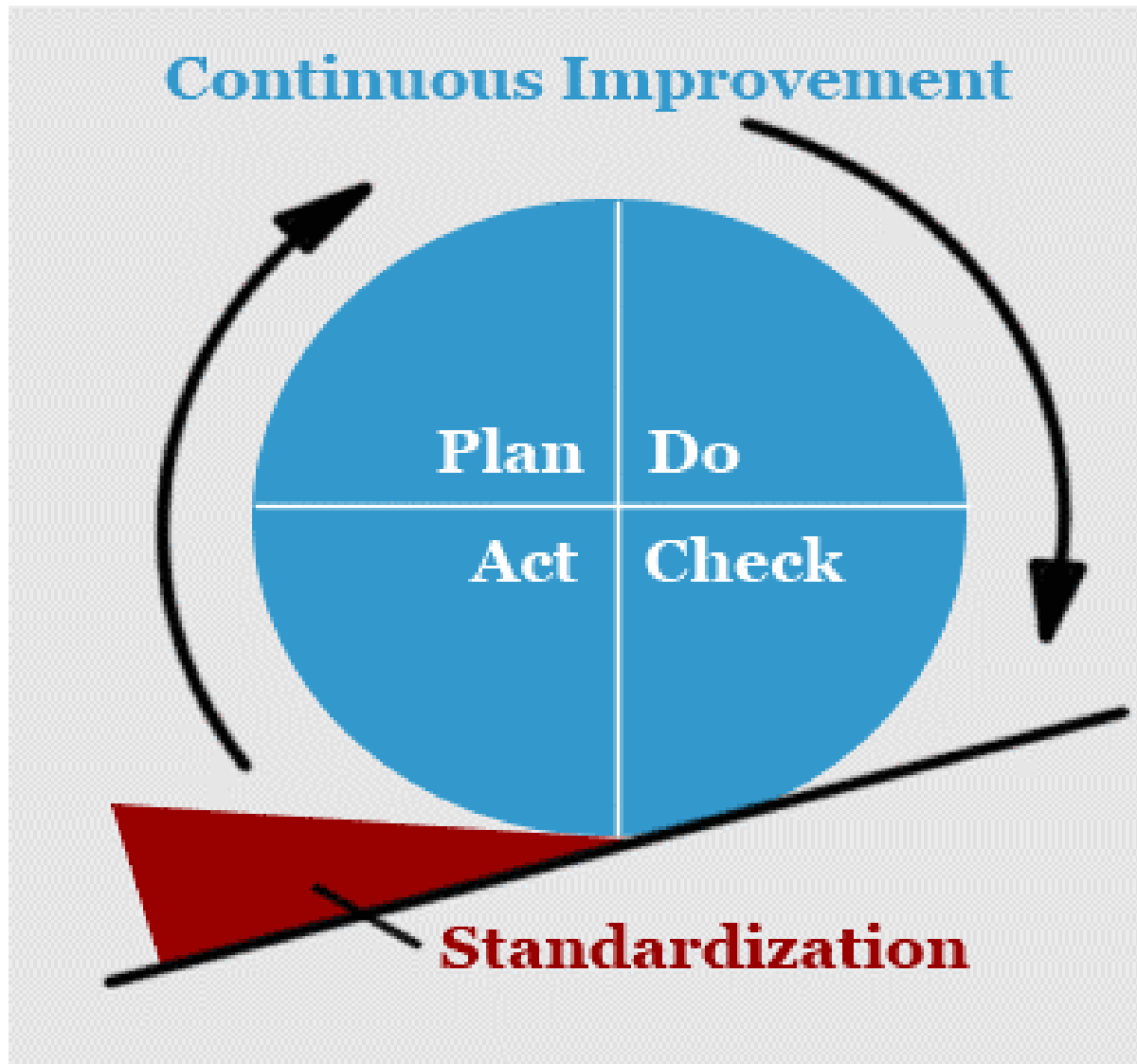
The Design and Evaluation Of Physical Protection Systems

Mary Lynn Garcia



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Expectation: Continuous Improvement



Recommendations:

- **Identify Expectations & Stakeholders;**
 - Engage, Educate, Share, Prepare
 - Radiation Safety Sub-Committees
 - Plan for needed resources
- **Perform Self-Audits**
 - “Program Reviews” (standardized documentation)
- **Monitor NC RPS and NRC websites**
- **Develop and document comprehensive programs**
 - Document revisions



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New (IC) License Applications:

...the process for a license application that is identified to include ***quantities of concern*** will undergo BOTH the standard (health & safety) licensing process and a concurrent, but separate, Increased Security application assessment (***i.e. two separate application packages will be required***)

(This will take longer than standard license application process)



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