




Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

Canada

# IDENTIFYING AND PROVIDING NECESSARY SKILLS AND COMPETENCIES FOR INDIVIDUALS WITH RADIOLOGICAL SECURITY ACCOUNTABILITIES



Round Table on the Role of Standards for Strengthening the Security  
of Radioactive Sources used in Medical Applications  
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# Overview

- Understanding the threat
- Understanding the consequences
- Security culture
- Security awareness training
- Supervisory training
- Conduction of exercises
- Cyber security
- Working group



# Understanding the Threat

- National threat: Threat to the nation state, including its citizens, economy and infrastructure.
- Threat to nuclear material: Threat to nuclear security could include criminals acquiring and using nuclear material to build nuclear explosive devices; or using radioactive material to cause harm to individuals or the environment through the construction of radiological dispersal devices (RDD) or radiological exposure devices (RED).

# Understanding the Threat

Canada's National Terrorism Threat Levels and the security response

Very Low	Low	Medium	High	Critical
A violent act of terrorism	A violent act of terrorism	A violent act of terrorism	A violent act of terrorism	A violent act of terrorism
is highly unlikely	is possible but unlikely	could occur	is likely	is highly likely and could occur imminently
Measures are in place to keep Canadians safe.	Measures are in place to keep Canadians safe.	Additional measures are in place to keep Canadians safe.	Heightened measures are in place to keep Canadians safe. Canadians are informed what action to take.	Exceptional measures are in place to keep Canadians safe. Canadians are informed what action to take.

At all times, Canadians will be informed if they need to take actions to stay safe.

Source: Government of Canada

# Understanding the Threat

- Outsider threat: Occurs when an individual or a group of individuals seek to attack an organization in hopes to steal goods or sensitive information, sabotage, or otherwise negatively affect a facility.
- Insider threat: Action taken by individual(s), with access or inside knowledge, which would allow for the exploitation of the organization's security, systems, services, products, information or goods.



# Understanding the Consequences

- Direct consequences are the immediate impacts of the malicious use of radioactive sources.
- Indirect consequences are the long-term impacts of the malicious use of radioactive sources.



# Security Culture

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- The CNSC defines security culture as:  
  
“The characteristics of the work environment, such as the values, rules, and common understandings that influence workers’ perceptions and attitudes about the importance that the organization places on security”

Regulatory Document 2.1.2, Safety Culture

# Security Awareness Training

- Basic security awareness training should:
  - Ensure staff understand their roles and responsibilities for security
  - Ensure protection of prescribed and/or sensitive information
  - Ensure staff are trained to recognize and report suspicious activities for example:
    1. Using false identification;
    2. Recognizing suspicious behavior;
    3. The importance of reporting lost or stolen uniforms/badge or other material; and,
    4. Behavioral changes in employees/contractors.
- Refresher training should be conducted on a regular basis





# Supervisory Awareness Training



- Supervisors are trained to recognize behavioral changes in all personnel, including contractors, that could pose a risk to security at a facility which conducts licensed activities.

# Personnel Training Program

- 2 principles
  - Performance-oriented training: preparation for performance on the job
  - Systematically developed training: shall be defined, produced and maintained through an iterative and interactive series of steps, leading from the identification of a training requirement to the confirmation that the requirement has been satisfied
- Maintain records
- Formal evaluation process



# Security Personnel

- Procedures and Protocols
- On-the-job training
- Foster a strong security program and culture
- Building relationships with the local law agency



# Conduction of Security Exercise

- Drills: Focused exercises to test the operation of its physical protection measures and the readiness of its security personnel.
- Table top exercise: Involves key personnel discussing simulated scenarios in an informal setting.
- Full scale exercise: Is an exercise to test the effectiveness of contingency plans and of the physical protection systems.



# Conduction of Security Exercise

Planning of an exercise should include:

1. Collaboration between the licensee and the national regulator
2. Identifying roles and responsibilities
3. Clear, concise and measurable objectives and criteria;
4. Development of scenarios in accordance with objectives
5. Licensee self evaluation and regulator evaluation



# Cyber Security

- Educate Your Employees on Cyber Safety
- Know the threats
- Protect your social networks
- Watch out for phishers



# Cyber Security

- Lock computer screens
- Contact IT in an emergency
- Plan ahead for departing employees



# Forum of Discussion

- Working Group
- Sharing information
  - Lessons learned
  - Prevention
  - Training





# Conclusion

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- Provide more guidance on security training
- Examining gaps
- Sharing information and staying connected





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Thank You! Questions?

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