Commission canadienne de sûreté nucléaire

Canadian Nuclear Safety Commission

Presentation to the IAEA
Update on the CNSC Orphan Source Strategy

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February 28, 2012

Presentation Outline

- Overview of the Canadian Strategy to manage orphan sources
- Key elements of the strategy
- Highlights of the implementation to date
- Challenges moving forward

Background

- IRRS (June 2009) suggested that CNSC have an orphan source recovery program
- CNSC conducted a full review of its regulatory oversight of orphan sources
- Canadian strategy was presented during the IAEA meeting on the management of Orphaned Sources held in Portugal 2010
- Progress on the implementation

CNSC Orphan Source Program

What is an orphan source?

A radioactive source that is not under proper regulatory control

Examples of Orphaned Material

Scrap Metal (Damaged Devices)

Abandoned Tritium Lights

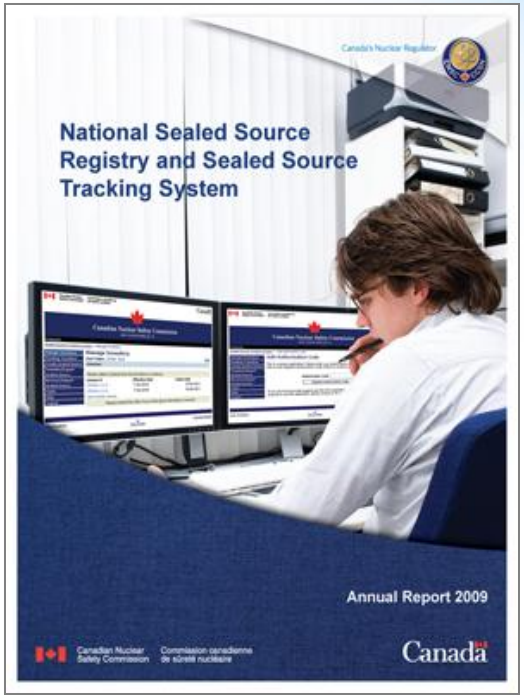
Static Eliminator

CNSC Orphan Source Program

- The CNSC has implemented a regulatory strategy for dealing with the discovery of orphan sources based on:
  - **regulatory oversight**
  - **promotion and communication**
  - **response and recovery**
- Program is risk-informed

Regulatory Oversight

- Licensing the possession, use, import/export of sealed sources
- Sealed source tracking through a National Sealed Source Registry
- Licensee inventory control and verification by inspectors
- Initiated the development of a financial guarantee regime for all licensees



Regulatory Oversight: Financial Guarantee

- Commission direction provided that all licensees have a financial guarantee
- Risk-informed process, (accounting for financial and radiological risks)
- Recognition of public vs private institutions
- Formula-based approach under consideration
- Amount per item and base administration fee
- Consultation on-going

Promotion and Communication

- Outreach targeting Recycling and Steel Industry
- On-going discussions with Recycling Industry
- New regulatory provisions to be proposed to the *Packaging and Transport of Nuclear Substance Regulations*
- Ongoing development of procedures to facilitate the transport of municipal waste containing medical radioisotopes
- Distribution of poster and pamphlet

Promotion and Communication: New Poster and Pamphlet

Industry encouraged to deal with sources identified by:

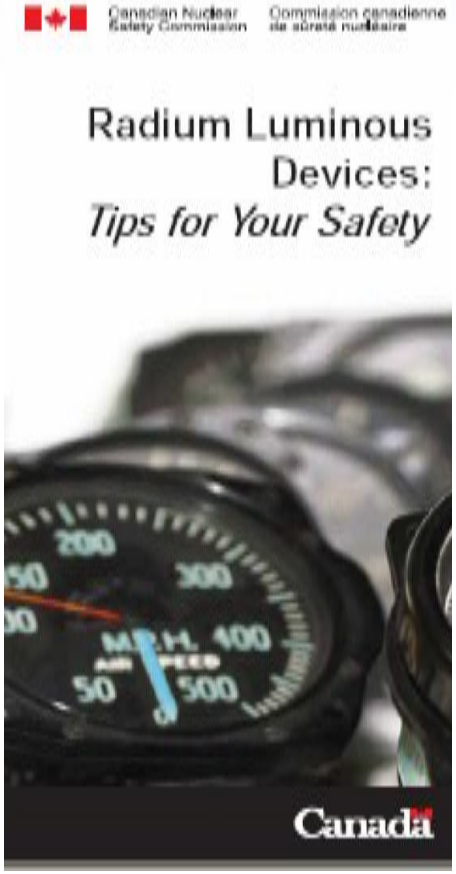
- Validating
- Investigating
- Reporting

Response and Recovery

- Reporting to Regulator:
  - Licensees/Border crossing staff
  - Waste and scrap metal facility operators
  - Members of the public
- Identified source → licensee is responsible
- Unidentified source → **finder** is responsible
- CNSC will investigate and provide assistance
- CNSC will assume full control as a last resort

Radium Luminous Devices Recovery Program

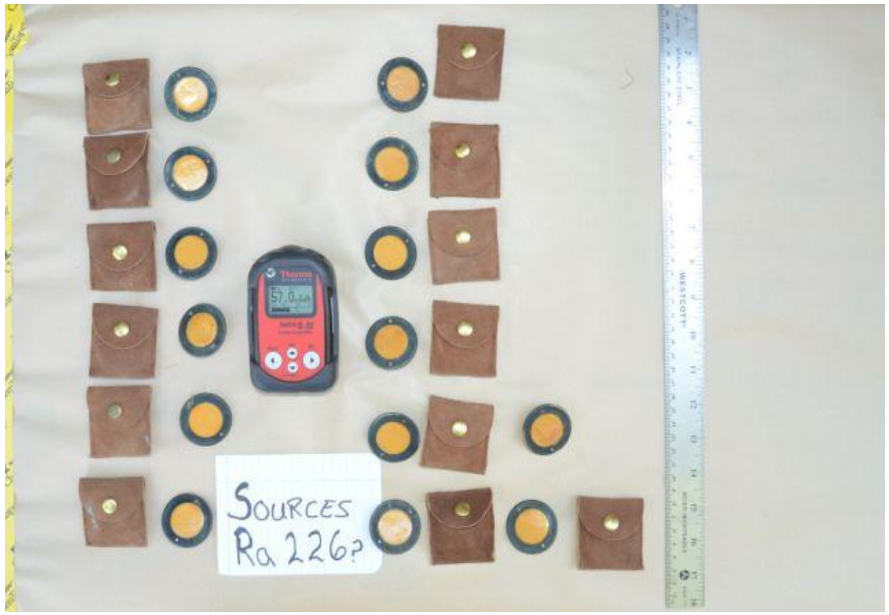
- Possession of devices exempted from regulations in 2006
- Information provided to the public regarding safe management
- Cooperative program established with another government agency in Canada to dispose of historic devices



Radium Luminous Devices Recovery Program

- Successfully collecting and disposing of historic items containing radium luminous materials

Historic Memorabilia



Historic Marine Luminescence Devices

Next Steps - Orphan Source Strategy

- Continuous improvements in regulatory oversight (e.g. licensing, sealed source tracking)
- Continued development and implementation of guidance (both internal and external) on the identification, recovery and disposal of orphan sources
- Implementation of a financial guarantee program

Conclusion

- Canada has an effective regulatory strategy in place for orphan sources
- On-going communication with stakeholders and public is essential for successful implementation
- CNSC continues to work with industry to address challenges associated with the discovery and disposal of orphan sources

For More Information on the CNSC

Annual Report 2010-11

Visit our Web site
nuclearsafety.gc.ca

Thank You!

Questions???