



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Worldwide Regulatory Challenges of Radioactive Legacy Sites – IAEA Working Forum (Part 1)

- Canada's Legacy Site Regulation

*Ron Stenson, Senior Project Officer
Wastes & Decommissioning Division*



nuclearsafety.gc.ca



e-Docs #



The Canadian Context



- ✦ as a best guess there are over 10,000 orphaned mine sites in Canada

- ✦ There are approximately 100 historic and Legacy uranium **mine** sites in Canada
- ✦ Of these 20 are closed U **mill** sites, with associated tailings
- ✦ Of these twenty, 6 are **Legacy** sites
- ✦ Of these six, 2 remain to be remediated



Financial Guarantees

- ❖ Since the 1970's in Canada, governments have taken a “life-cycle” approach to regulating mining (and other industries) and the likelihood of unexpected additions to the legacy site inventory is very small.
- ❖ Governments in Canada have put in place regulations to help ensure that no new legacy mines are created.





Financial Guarantees (2)

- ❖ All current mines require a closure plan and a financial guarantee to cover the costs of closure and long term management, should the property fall to public ownership.
- ❖ This ensures that funds are in place without relying on taxpayer funding.
- ❖ **This does nothing to fund the remediation of existing legacy sites.**





NOAMI

- ❖ Canada has established a government funded National Advisory Committee to study the issues associated with all legacy sites. The National Orphaned and Abandoned Mine Initiative (NOAMI) has been active since 2001.
- ❖ CNSC, the national nuclear regulator, has been an observer with this group since its inception.





Of interest to RSLs, NOAMI publications:

- ✳ [Policy Framework in Canada for Mine Closure and Management of Long-term Liabilities: A Guidance Document](#) (Cowan Minerals Ltd., 2010)
- ✳ [Report on the Legislative, Regulatory, and Policy Framework Respecting Collaboration, Liability, and Funding Measures in relation to Orphaned/Abandoned, Contaminated, and Operating Mines in Canada](#) (Castrilli, 2006)
- ✳ [Rehabilitating Abandoned Mines in Canada: A Toolkit of Funding Options](#) (Cowan Minerals Ltd., 2006)
- ✳ [Best Practices in Community Involvement: Planning for and Rehabilitating Abandoned and Orphaned Mines in Canada](#) (NOAMI brochure, 2003)
- ✳ [Guidelines for Legislative Review](#) (NOAMI, 2004)
- ✳ [Barriers to Collaboration: Orphaned/Abandoned Mines in Canada.](#) (Castrilli, 2002)



NOAMI (2)

- All of these documents can be accessed through the NOAMI website at:



www.abandoned-mines.org



CLEAN Program

- ✦ By definition **Legacy sites** are “owned” by the government and had fallen outside of the CNSC mandate until the year 2000.
- ✦ From 2000 to 2006 the CNSC managed the regulation of Legacy sites through the **Contaminated Lands Evaluation and Assessment Network** (CLEAN) program.
 - The CLEAN Program was established to deal with sites previously not regulated under the *Atomic Energy Control Act*, but which now require regulation under the *Nuclear Safety and Control Act* (NSCA).





Legacy Sites Subject to *NSCA*

- ✦ 78 U Mine sites without tailings, ON, SK, NWT
- ✦ Port Radium, NWT – U Mine / Mill
- ✦ Rayrock, NWT – U Mine / Mill
- ✦ *Beaverlodge, SK – U Mine / Mill*
- ✦ *Gunnar, SK – U Mine / Mill*
- ✦ *Lorado, SK – U Mill*
- ✦ Agnew Lake, ON – U Mine / Mill
- ✦ Deloro, ON – U Contaminated Land
- ✦ Port Hope, ON – U / Ra Contaminated Lands
- ✦ GTA, ON – Ra Contaminated Lands / Buildings
- ✦ NTR, NWT – U Contaminated Lands



Regulatory Approach

- ❖ Since conventional mining in Canada is regulated by the Provinces and Territories, legislation exists to safely manage conventional mine/mill sites.
- ❖ CNSC took the position that, in the absence of uranium mill tailings, the 78 mines without mills are indistinguishable from conventional mines and would be best managed under Provincial legislation.
- ❖ In 2004 the CNSC **exempted** these sites from the Federal requirement to hold a licence to possess, manage or store nuclear substances. This **reduced the regulatory burden** on these Legacy sites and in many cases simplified the path forward for remedial activities.



Regulatory Approach (2)

- ✳ In many cases the CNSC has, while ensuring that immediate safety concerns have been addressed, regulated through **motivation**.
- ✳ The regulation of the Public Sector is a difficult balance which needs to recognize the **joint authority**, and often **duel role**, of the agencies which “own” the Legacy site.
- ✳ Since none of the Canadian legislation (at any level of government) has been designed to address Legacy issues, the **interpretation** of the existing laws, while ensuring safety, and respecting the **intent** of the legislation has been the biggest on-going challenge.
- ✳ **Reasonableness**, **transparency**, and **inclusiveness** are all import concepts in our regulatory approach.



Regulatory Approach ⁽³⁾

- ❖ The CNSC has recognized the absence of legislation in Canada which addresses Legacy issues directly.
- ❖ The CNSC is currently exploring options for the development of waste management regulations under the *NSCA* which will include consideration for Legacy and historic contaminated sites.





IAEA RSLs / CNSC

- ❖ Canada's involvement in RSLs has been limited by a number of factors:
 - Availability of staff
 - Foreign travel budgets
- ❖ Canada's involvement to date includes participation by both the CNSC and one of our licensees:
 - 2011 – 2nd TM on RESL
 - 2012 – IAEA International Workshop
 - 2012 – Survey on Training Inspectors



- ❖ Potentially, Canada may facilitate a Workshop/Tour in the near future.



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