#### Canadian Nuclear

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

- Canada's Legacy Site Regulation

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#### **The Canadian Context**

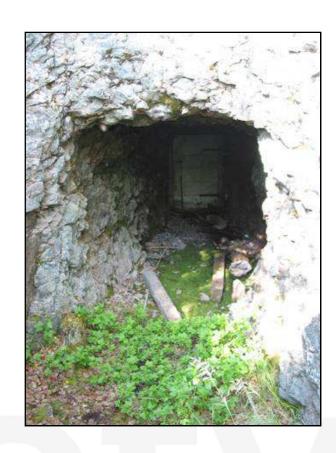


- as a best guess there are over 10,000 orphaned mine sites in Canada
- There are approximately 100 historic and Legacy uranium mine sites in Canada
- Of these 20 are closed U mill sites, with associated tailings
- Of these twenty, 6 are Legacy sites
- Of these six, 2 remain to be remediated



#### **Financial Guarantees**

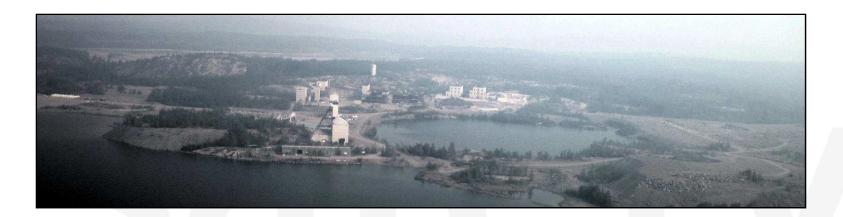
- Since the 1970's in Canada, governments have taken a "lifecycle" approach to regulating mining (and other industries) and the likelihood of unexpected additions to the legacy site inventory is very small.
- Governments in Canada have put in place regulations to help ensure that no new legacy mines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



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)

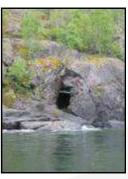
- In many cases the CNSC has, while ensuring that immediate safety concerns have been addressed, regulated through motivation.
- The regulation of the Public Sector is a difficult balance which needs to recognize the joint authority, and often duel role, of the agencies which "own" the Legacy site.
- 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 2<sup>nd</sup> TM on RESL
  - 2012 IAEA International Workshop
  - 2012 Survey on Training Inspectors



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



# nuclearsafety.gc.ca

