



# Institutional Control Program for Decommissioned Mine and/or Mill Sites in Saskatchewan

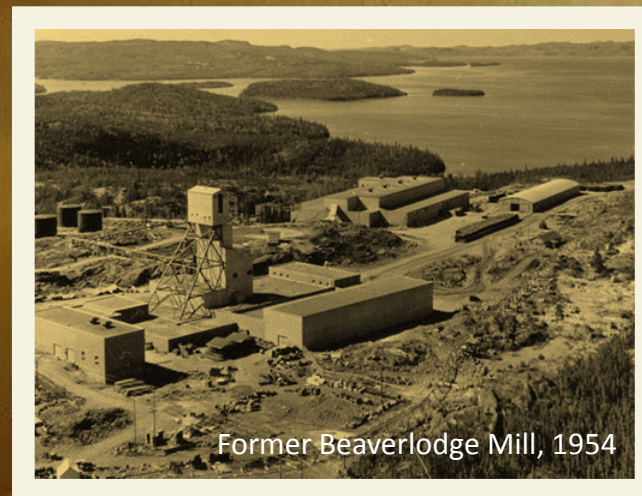
Technical Briefing

October 3, 2018

CMD 18-M38.A



CNSC Staff  
Presentation



Former Beaverlodge Mill, 1954



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## Presentation Outline

- Purpose of presentation
- Background
- Decommissioning
- Institutional Control Program (ICP) in Saskatchewan
- International obligations
- CNSC's role in the ICP
- Monitoring and maintenance of sites in the ICP
- Other Canadian mine and mill sites
- Conclusions



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## Purpose of Presentation

- Describe the principle of Institutional Control (IC) in the context of the lifecycle management of uranium mines and mills in Canada
- Provide information on the Institutional Control Program (ICP) in Saskatchewan
- Outline how the ICP provides assurance of future regulatory oversight to the CNSC



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# BACKGROUND



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## Background

# Institutional Control (IC)

- IC is the control of residual risks at a site after it has been decommissioned\*
- Controls can include:
  - active measures (requiring activities on the site such as water treatment, monitoring, maintenance, etc.)
  - passive measures (such as land use restrictions, etc.)
- Provincial Regulatory oversight is required
  - CNSC licensing is no longer required if site is below clearance levels or site holder receives Commission exemption

\* from *Waste Management, Volume II: Assessing the Long-Term Safety of Radioactive Waste Management (REGDOC-2.11.1)*



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## Background

# Institutional Control Program

- ICP can protect interests of the land owner (province or territory) by ensuring funds are available for long-term monitoring or maintenance of properties
- ICP provides a mechanism for licensees to be released from licensing obligations
- In the absence of ICP, ongoing monitoring and maintenance of decommissioned uranium mine and/or mill sites will continue to be done by a licensee for as long as required



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## Background

# Saskatchewan Uranium Mine and/or Mill Sites

### Operating

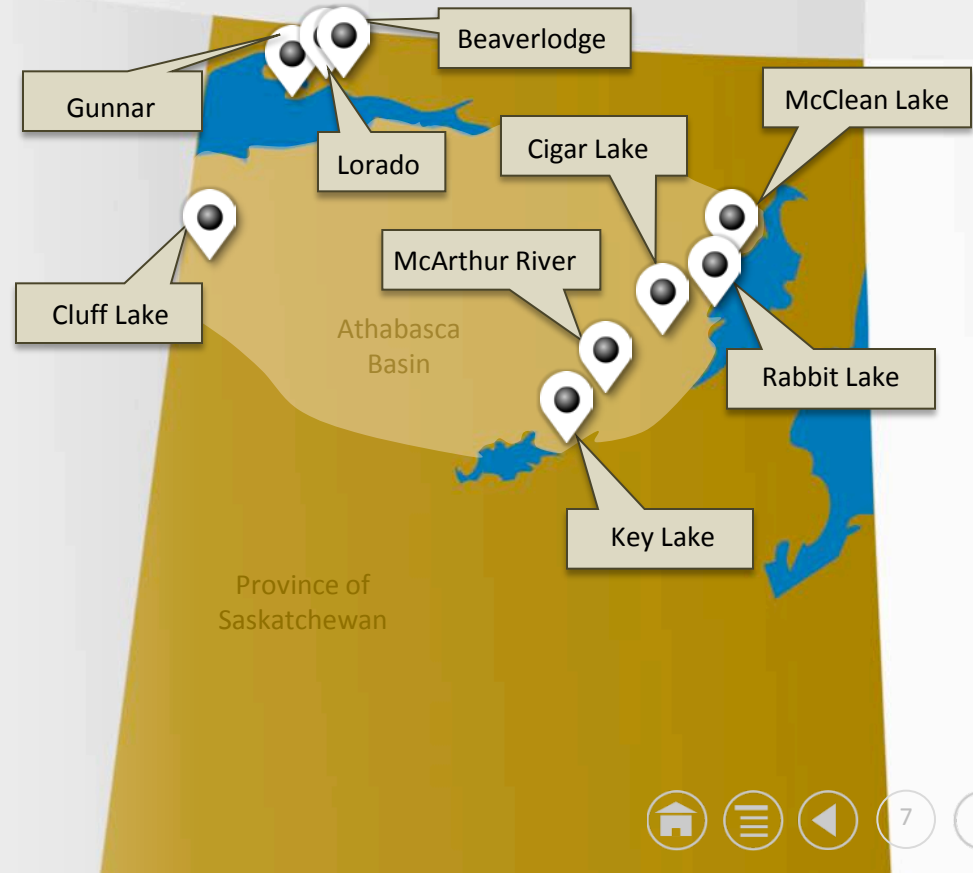
- Cigar Lake Operation (mine)
- McArthur River Operation (mine)
- Rabbit Lake Operation (mine/mill)
- Key Lake Operation (mill)
- McClean Lake Operation (mill)

### Decommissioned

- Beaverlodge Project
- Cluff Lake Project

### Remediation Projects

- Gunnar
- Lorado



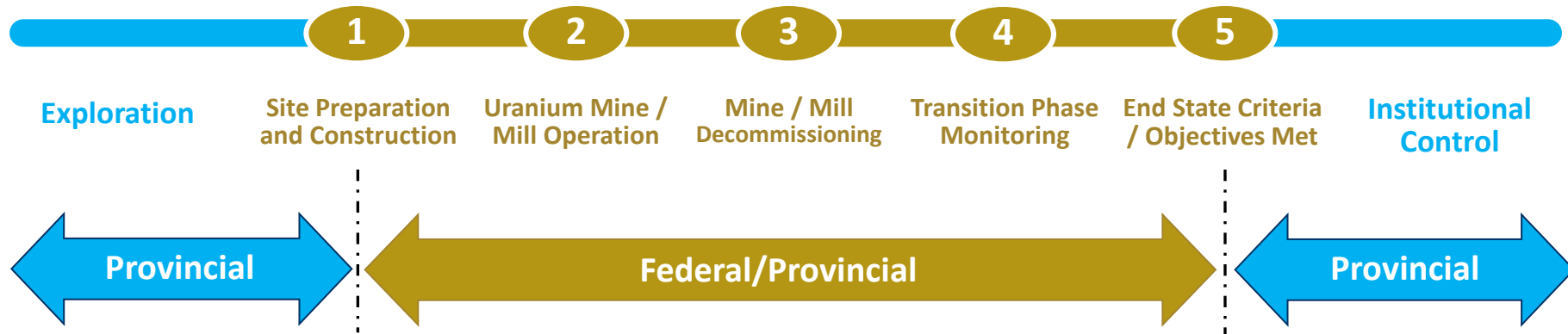


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## Background

# Saskatchewan Uranium Mines and Mills Life Cycle



## Responsibility returns to the province upon transfer to ICP





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# DECOMMISSIONING



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## Decommissioning Decommission Planning

- Planning for decommissioning and the establishment of financial guarantee required as part of the lifecycle of the facility, including:
  - preliminary decommissioning plan (early in life-cycle of the activity or facility)
  - detailed decommissioning plan (prior to decommissioning)
- CNSC regulatory lifecycle oversight ensures:
  - protection of the health and safety of persons
  - continued protection of the environment



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## Decommissioning End-State Criteria

- As part of decommissioning planning and implementation process, proposed physical, chemical and radiological end-state condition of the site (post decommissioning) is established
- CNSC has a Memorandum of Understanding (MOU) with the Saskatchewan Ministry of Environment (SMOE) to collaborate on the decommissioning process, including the establishment of end-state criteria
- Primary objective is to leave areas safe for traditional land uses and in an ecological condition consistent with surrounding area
- Land use restrictions may be required post decommissioning and during IC



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## Decommissioning Financial Guarantees

- Decommissioning plans provide cost basis for financial guarantees, ensuring all decommissioning work can be completed as planned
- Financial guarantees required by CNSC are separate from funds or financial guarantees required by ICP
- ICP requires funds be provided for monitoring and maintenance and unforeseen events

**Funds available to decommission, monitor  
and manage sites**



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# INSTITUTIONAL CONTROL PROGRAM IN SASKATCHEWAN



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## ICP in Saskatchewan Background

- Province of Saskatchewan is unique in Canada in that it has established an ICP
- ICP has been in place since 2007
- First uranium properties in the ICP were 5 properties from the Beaverlodge Project in 2009
- Future applications for inclusion in ICP are anticipated to include properties from the Beaverlodge Project (2018/19) and the Cluff Lake Project (2019+)
- Expectation is that all currently active and remediating mine/mill sites in Saskatchewan will enter ICP (post decommissioning)



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## ICP in Saskatchewan

# What is the ICP?

- ICP outlines a formal regulatory process for long-term site management by the Province
- *The Reclaimed Industrial Sites Act (RISA)* and *The Reclaimed Industrial Sites Regulations (RISR)* legislate the establishment of the ICP in Saskatchewan
- Managed by Saskatchewan Ministry of Energy and Resources (MER)



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## ICP in Saskatchewan

# What is the ICP?

- Transfer of properties/facilities into ICP occurs after all required steps are completed:
  - ✓ decommissioning complete
  - ✓ site is safe and stable
  - ✓ sufficient funds in place for monitoring and maintenance and unforeseen events
  - ✓ not regulated by any other level of government
- ICP applies to all mine and mill sites located on provincial Crown land, not just uranium properties

**Process ensures only low risk sites enter ICP and  
remain low risk in ICP**





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## ICP in Saskatchewan

# Purpose of the ICP

The RISA [subsection 3(2)] states the purpose of the ICP is:

- a) to set out the conditions by which the Government of Saskatchewan will accept responsibility for land that, in consequence of development and use, requires long-term monitoring and, in certain circumstances, maintenance;*
- b) to ensure that the required monitoring and maintenance are carried out on that land;*
- c) to provide a funding mechanism to cover costs associated with the monitoring and maintenance on that land; and*
- d) to ensure that certain records and information are preserved with respect to that land.*

## ICP is consistent with international recommendations



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## ICP in Saskatchewan

# Objectives of the ICP

Primary objectives of the ICP are to:

- protect human health and safety
- protect the environment
- be sustainable
- ensure future generations are not burdened
- recognize federal jurisdiction and national and international obligations

**Objectives compatible and consistent with CNSC's objectives**



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## ICP in Saskatchewan Summary of Process





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# ICP in Saskatchewan

## Components of the ICP



<b>ICP Registry</b>	Location of closed site
	Description of its former operator/licensee
	Site description
	Historical records of activities
	Description of the ICP site monitoring and maintenance obligations
	Description of any restrictions for surface land use or mineral disposition
<b>Institutional Control Funds</b>	Institutional Control Monitoring and Maintenance Fund (ICMMF) - for future monitoring and maintenance costs (property specific)
	Institutional Control Unforeseen Events Fund (ICUEF) - for unforeseen events (pooled fund)



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## ICP in Saskatchewan Legislation Amendment

- ICP legislation reviewed regularly
- Changes to legislation proposed in 2017; expected to be finalized in late 2018
  - Province proposing to amend legislation to provide for transfer of properties out of the ICP, in order to allow companies access for exploration and/or re-mining
- MER consulted with the CNSC regarding the proposed changes to legislation
- Legislation will require MER consult with the CNSC prior to any proposed transfer from the ICP to a responsible party

**CNSC staff agree with the proposed wording and  
continue to work cooperatively with MER**



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## ICP in Saskatchewan Next Steps

- Discussions initiated between MER, Saskatchewan Ministry of Environment (SMOE) and the CNSC regarding development of a cooperative arrangement or MOU to formalize our working relationship specific to ICP

**Legislation changes will have no impact on existing  
or future ICP applications**



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# INTERNATIONAL OBLIGATIONS



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## International Obligations

- A primary objective of the ICP is to not only recognize CNSC's regulatory role, but also international obligations
- Meets requirements of the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management*

### ICP meets requirements of Joint Convention





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# CNSC'S ROLE IN THE ICP



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## CNSC's Role In The ICP **Regulatory Authority**

- Province only accepts post decommissioned sites into the ICP if they are either not licensed or are exempted from CNSC licensing (subsection 3(f) of the RISR)
- Legislative Authority
  - Section 7 of the *Nuclear Safety and Control Act*
  - Section 11 of the *General Nuclear Safety and Control Regulations*



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## CNSC's Role In The ICP **Regulatory Authority**

- CNSC staff review detailed environmental data and predictions in their assessment of the request to release sites to the ICP and make recommendations to Commission
- CNSC staff recommendations are based on protection of the environment, health and safety of persons and maintaining national security
- Commission decides whether to exempt licensee or any other person from requiring a licence under the NSCA with respect to the properties under consideration



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## CNSC's Role In The ICP Sites in the ICP

- Once Commission exempts the activity, person, ...etc. (as per section 7 of NSCA) from CNSC licensing, regulatory control is maintained entirely by province
- Commission retains the authority under the NSCA to re-determine its exemption decision

**Exemptions only considered if sites are safe**



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# MONITORING AND MAINTENANCE IN THE ICP



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## Monitoring and Maintenance of Sites in the ICP

### Frequency of inspections and reporting

- Monitoring and maintenance programs managed by province
- Province prepares ICP registry reports annually which include:
  - property details, funds deposited, land use restrictions, etc.
  - reports publically available through ICP Web page

Beaverlodge - Eagle area  
(ICP registry # ICR-05) inspection track  
September 2014



Beaverlodge -Eagle shaft cap  
September 2014



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# Monitoring and Maintenance of Sites in the ICP

## Frequency and reporting

- Monitoring and maintenance frequency is specific to each site
- Monitoring schedule for sites currently in ICP is every 5 years
  - monitoring report for Beaverlodge sites transferred to the ICP in 2009 prepared in 2014
- Reports available to public by request

**Monitoring and maintenance ensure sites remain safe**



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# OTHER CANADIAN MINE AND MILL SITES





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## Other Canadian Mine and Mill Sites

- Province of Saskatchewan currently the only Canadian jurisdiction with a legislated ICP for mine/mill sites
- Experience gained from Saskatchewan's ICP will assist CNSC staff in working with other jurisdictions that want to develop their own ICP
- Any exemption request will be reviewed on a case-by-case basis based on section 11 of the *General Nuclear Safety and Control Regulations*



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## Other Canadian Mine and Mill Sites

- In absence of an IC program, monitoring and maintenance conducted by licensee
- CNSC continues to exert regulatory authority:
  - regular CNSC inspections are conducted
  - sites required to have financial guarantees in place
  - regular reporting and updates to the Commission

**Regulatory oversight ensures risks are managed and sites are safe**



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# CONCLUSIONS



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## Conclusions

- Decommissioning reduces the regulatory oversight requirements due to the low-risk nature of the remediated site
- Primary decommissioning objective: return sites to a condition that allows traditional land use
- ICP is effective in ensuring properties accepted are safe, secure and stable, and will:
  - a) protect the environment and the health and safety of persons
  - b) maintain national security
  - c) achieve conformity with measures of control and international obligations to which Canada has agreed



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## Conclusions

- Commission may grant exemptions from CNSC licensing to allow sites to be transferred into ICP when all required conditions are met
- ICP provides effective control of any residual risks at a site after it has been decommissioned
- ICP is well established and managed by a competent authority
- If there is no ICP, the CNSC continues to exercise regulatory control

**Protection of people and environment continues in ICP**



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