



Municipality of Port Hope Council

Port Hope Project - PHAI Cleanup Criteria

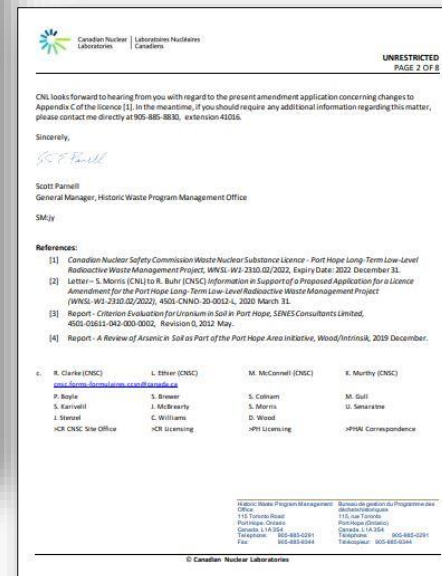
2020 September 15



Canadian Nuclear Laboratories | Laboratoires Nucléaires Canadiens

PHAI Cleanup Criteria: Review

- CNL has submitted an application to the Canadian Nuclear Safety Commission (CNSC) requesting a change to the Port Hope Area Initiative (PHAI) Cleanup Criteria.
- Historic low-level radioactive waste in the Port Hope area is cleaned up to meet the levels of contaminants set out in the criteria.
- The application recommends a change to the PHAI Cleanup Criteria for arsenic and uranium, and will be part of a formal review process by the CNSC.



PHAI Cleanup Criteria: Engagement

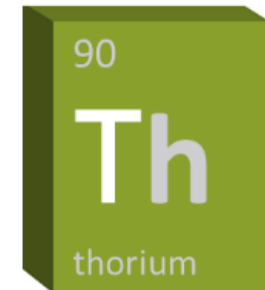
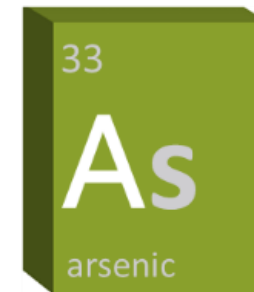
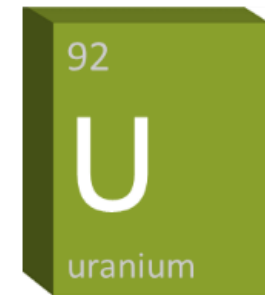
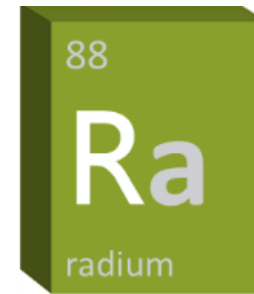
- The review process includes public engagement on the topic.
- Engagement also includes discussions with regulators and key stakeholders.
- A final decision will be made following the review with the CNSC and will require acceptance from all parties to the Legal Agreement.



Project Planning

Signature Contaminants of Potential Concern

PHAI Cleanup Criteria		
	Current	Recommended
As (μg)	18	100
U (μg)	23	35
Ra-226 (Bq/g)	0.29	0.29
Th-230 (Bq/g)	1.16	1.16



Changes to PHAI Cleanup Process

The amendment to the remediation verification process as well as the planned review of the cleanup criteria for arsenic and uranium is expected to address concerns about:

- Length of time a residential cleanup takes
- Impacts to property features resulting from PHAI work





Background and Context



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PHAI Cleanup Criteria

Developing the Criteria

- Cleanup Criteria are important because they address the question: “When is a property clean?”
- The criteria were developed through a co-operative effort involving the PHAI, scientific specialists, federal and provincial government agencies, peer reviewers, the municipalities and members of the public.
- Principles to guide the clean-up process were built on the statement in the Legal Agreement that:

“Canada shall clean up properties contaminated with historic low-level radioactive waste so that all such properties will be able to be used for all current and foreseeable unrestricted uses.”



Defining LLRW

Developing the Contaminants of Potential Concern (COPC)

- At the time of the Legal Agreement it was unclear what the COPC would be for the project.
- The Regulator left the development of the COPCs up to the project, which prompted a study to develop the COPC.
- This study looked at the elemental components of the ore mined and transported to Port Hope to be refined for radium.



Arsenic and Uranium

DECISION

Adopt generic (typically more conservative) criteria, or conduct a risk assessment/dose model and develop project specific criteria (tend to be less conservative)?

- Both viable options

All of the research indicated problems associated with adopting generic criteria at background levels.

There was a big push for published, easily comparable provincial generic standards by stakeholders.



Background

Knowledge Gained and Lessons Learned

- More information available through:
 - testing
 - remediation
- The scope of the PHAI cleanup is significantly larger than originally thought
- Meeting current PHAI cleanup criteria = substantially larger volume of waste = unintended environmental consequences
- Extensive demolition
- Tree removal
- Negative impact to natural character and heritage features



Background

Feedback from residents


- Property owners would like more input in the decisions being made about their property
- Dissatisfaction with the current “all or nothing” approach
- Property owners would like ability to choose to leave waste behind to preserve features
- Why is there the need for such an intrusive and wide-scale clean-up when:
 - CNSC has indicated no adverse effects to human health and the environment
 - CNL, AECL and MPH - Port Hope is a safe and healthy community



PHAI: Role and Responsibility

- PHAI defined in Legal Agreement
- Not a Regulatory Requirement
- Environmental Protection is key



 Canadian Nuclear Safety Commission / Commission canadienne de sûreté nucléaire


Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant Atomic Energy of Canada Limited

Subject Application for a Waste Nuclear Substance Licence for the Port Hope Long-Term Low-Level Radioactive Waste Management Project

Hearing Date August 26 and 27, 2009



AN AGREEMENT FOR THE CLEANUP AND THE LONG-TERM SAFE MANAGEMENT OF LOW-LEVEL RADIOACTIVE WASTE SITUATE IN THE TOWN OF PORT HOPE, THE TOWNSHIP OF HOPE and THE MUNICIPALITY OF CLARINGTON

AMONG

THE CORPORATION OF THE TOWN OF PORT HOPE,
A Municipal corporation pursuant to the Ontario Municipal Act (hereinafter referred to as "the Town of Port Hope")

OF THE FIRST PART

THE CORPORATION OF THE TOWNSHIP OF HOPE,
A Municipal corporation pursuant to the Ontario Municipal Act (hereinafter referred to as "the Township of Hope")

OF THE SECOND PART

THE CORPORATION OF THE MUNICIPALITY OF CLARINGTON,
A Municipal corporation pursuant to the Ontario Municipal Act (hereinafter referred to as "Clarington")

OF THE THIRD PART

AND

HER MAJESTY THE QUEEN IN RIGHT OF CANADA
as represented by the Minister of Natural Resources (hereinafter referred to as "Canada")

OF THE FOURTH PART

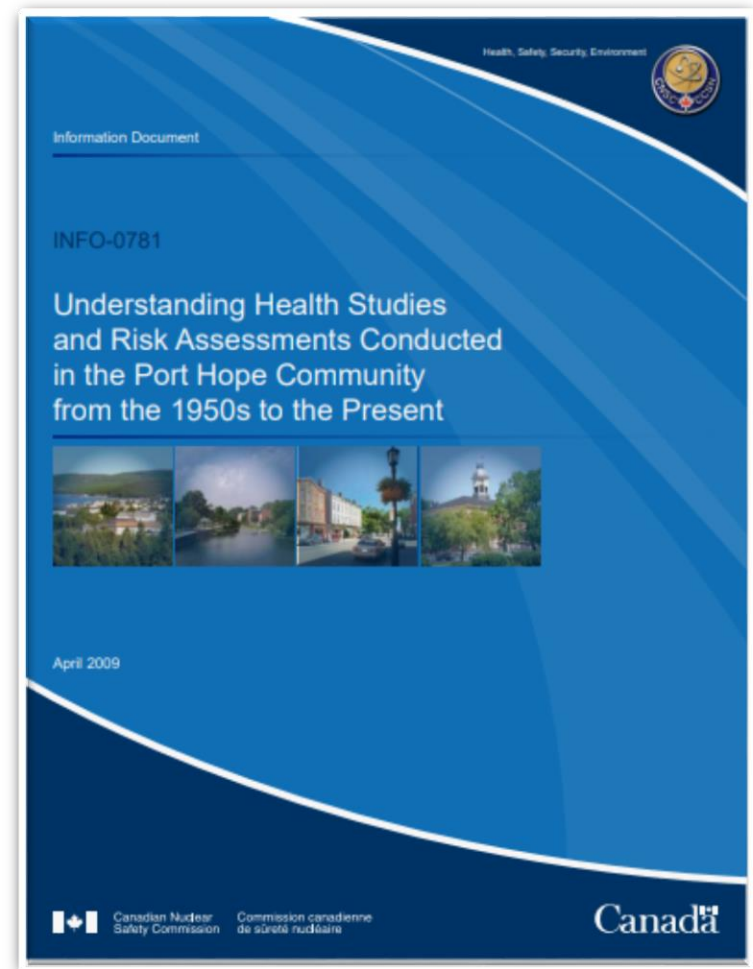
**As Amended December 2009*



PHAI: Health Impacts

Based on the environmental and epidemiological studies conducted in Port Hope and the findings of research studies conducted in other countries, the CNSC concludes that no adverse health effects have occurred or are likely to occur in Port Hope, as a result of the operations of the nuclear industry in the community.

The environmental and epidemiological studies conducted in Port Hope support each other, and overwhelmingly lead to the conclusion that the low levels of radiological and non-radiological environmental exposures within the town, resulting from the radium and uranium industry, have not caused any adverse effects on human health.



- CNSC



Public Engagement Plan



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Public Engagement Plan

Objectives



INFORMATION

Opportunity for any member of the public to access information about proposed changes



FEEDBACK

Means to ask questions about the proposed changes, process, benefits and impacts



CONFIDENCE

Build regulator/ key stakeholder confidence in availability of accurate information



Strategy

Three-Month Proactive Campaign

History of Cleanup Criteria



Scientific input



Benefits



Feedback and Evaluation



Protecting human health and the environment are top priorities



Communications Tactics



Join the Conversation!



Call us **905.885.0291**



Dedicated webpage **phai.ca** and email **info@phai.ca**

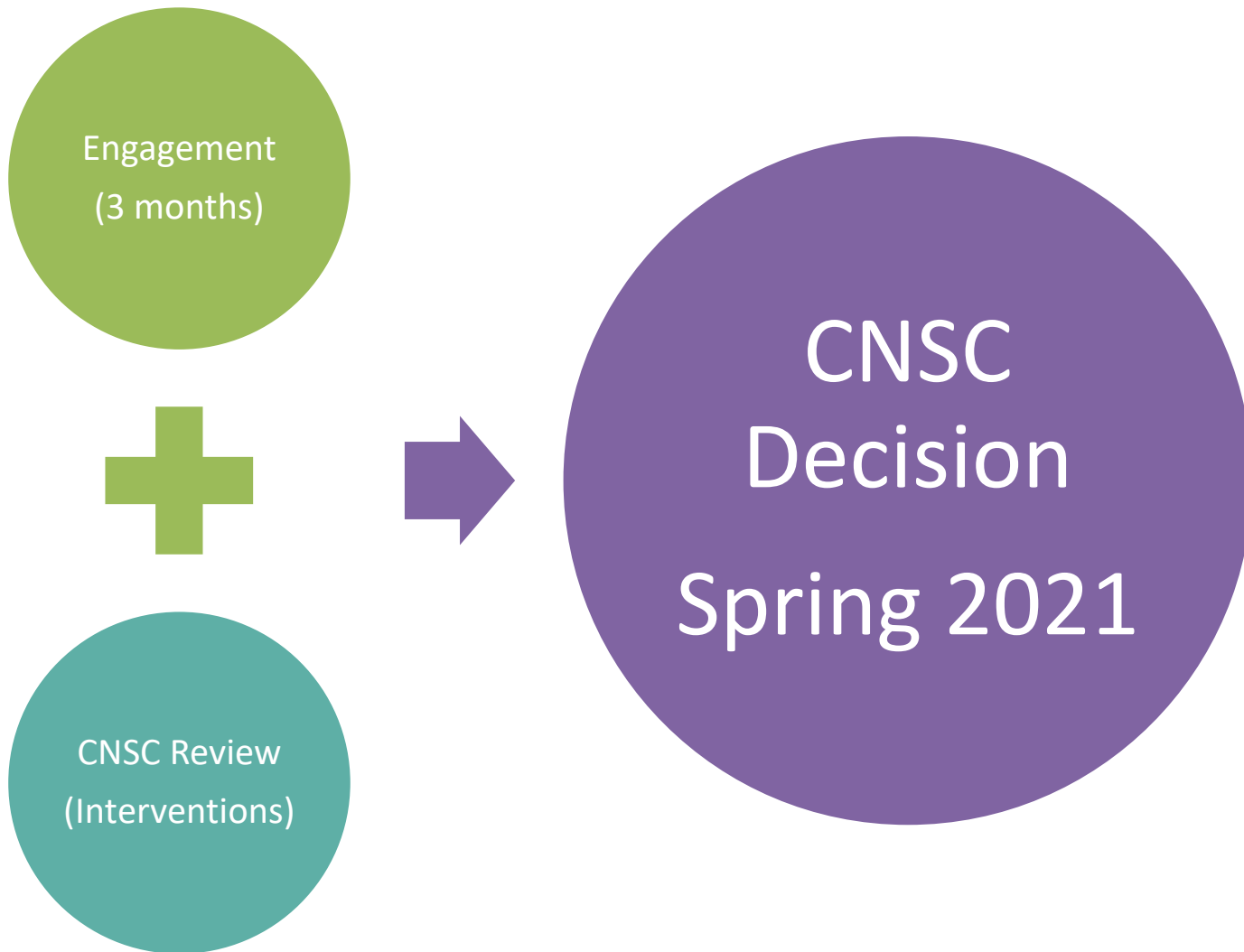


Attend Public Information Sessions/Meetings



Ask questions about how these changes might impact your property and the community

Timeline





Thank You

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