

### **Municipality of Port Hope Council**

Port Hope Project - PHAI Cleanup Criteria

2020 September 15

Canadian Nuclear 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.

	UNRESTRICTED PAGE 1 OF 8					
2020 March 31						
Marc Leblanc Commission Secretary Canadian Nuclear Safety Commission 280 SlaterStreet P.O. Box 1446: Station B	4501-CNNO-30-0013-L SP-2020-001	*** 3	nadian Nuclear	Laboratoires Naclifaires Catadiem		UNRESTRIC
P.U. Box 1046, Station B Ottawa, ON K1P 559						PAGE 2
Dear Mr. Leblanc,		No. of the local diversion of the				
	ONG-TERM LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT INCE LICENCE (WINSL-W1-2310.02/2022)	Appendix Coft	the licence [1]		the present amendment applicat should require any additional info 141016.	
The purpose of this letter is to apply for a licence amend Management Project Waste Nuclear Substance Licence, submitted in accordance with Section 24(2) of the Nucleo		Sincerely,				
Attachment A to this letter summarizes the information Regulations, in support of the amendment application.	equired by Section 6of the General Nuclear Safety and Control	Scott Parcell				
	guest for the acceptance of revised clean-up criteria for arsenic	General Manag	er, Historic W	aste Program Manageme	nt Office	
	has accordingly provided CNSC staff with additional supporting	SM:jy				
To assist the Commission in their consideration of this ag the justification to support the licence amendment requ	Radio (2) Letter Amen (WNS (3) Repor 4501-0	active Waste I r – S. Morris (C Idment for the L-W1-2310.02 rt - Criterion El 01611-042-001	Management Project, Wh NLI to R. Buhr (CNSC) Inf Part Hope Lang-Term Lai /2022), 4501-CNNO-20-0 valuation for Liranium in 5 3-0002, Revision 0, 2012	Gail in Part Hope, SENES Consulta	e: 2022 December 31. d Application for a Licence gement Project nts Limited,	
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### 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.



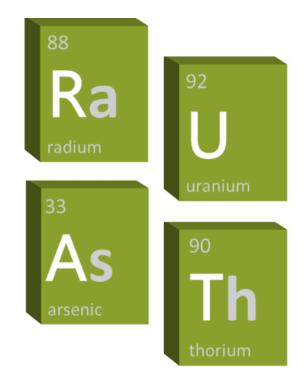
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### **Project Planning**

#### Signature Contaminants of Potential Concern

#### PHAI Cleanup Criteria

	Current	Recommended
As (μ/g)	18	100
U (µ/g)	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



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# **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:
  - o testing
  - o **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

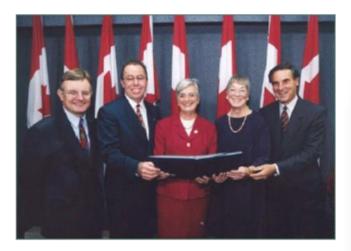






### **PHAI: Role and Responsibility**

- PHAI defined in Legal Agreement •
- Not a Regulatory Requirement •
- **Environmental Protection is key** ٠



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		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				
Canadian Nuclear Safety Commissio	Commission canadienne n de sünete nucléaire	THE CORPORATION OF THE MUNICIPALITY OF CLARINGTON. A Municipal corporation pursuant to the Ontario Municipal Act (hereinafter referred to as "Clarington")				
	Record of Proceedings, Including Reasons for Decision	OF THE THIRD PART				
	Reasons for Decision	AND				
	In the Matter of	HER MAJESTY THE QUEEN IN RIGHT OF CANADA as represented by the Minister of Natural Resources (hereinafter referred to as "Canada")				
Applicant	Atomic Energy of Canada Limited	OF THE FOURTH PART				
Subject	Application for a Waste Nuclear Substance Licence for the Port Hope Long-Term Low-Level Radioactive Waste Management Project					
		*As Amended December 2009				
Hearing Date	August 26 and 27, 2009					
	Canadã					
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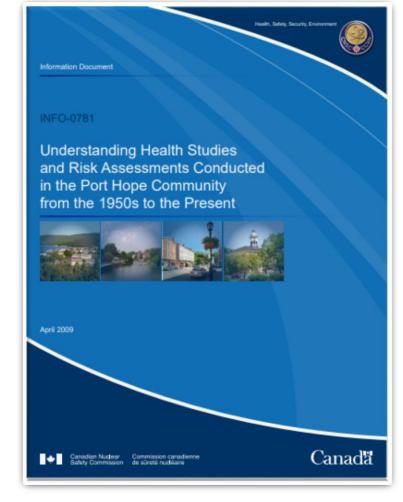
AN AGREEMENT FOR THE CLEANUP

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### **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.









### 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

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### Strategy

#### **Three-Month Proactive Campaign**

History of Cleanup Criteria

Scientific input

Protecting human health and the environment are top priorities

Benefits

Feedback and Evaluation

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### **Communications Tactics**





### Join the Conversation!



#### Call us 905.885.0291



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

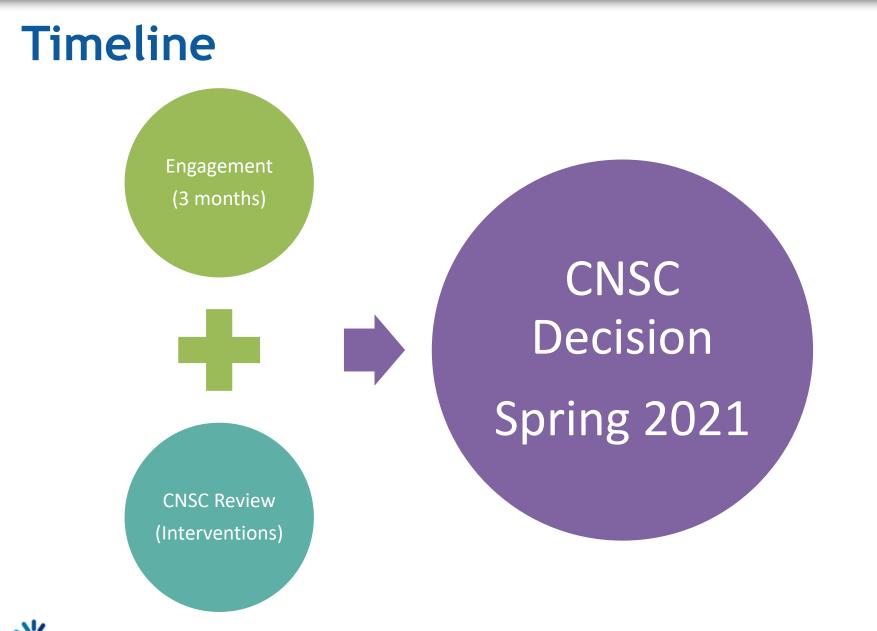


Attend Public Information Sessions/Meetings



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







### **Thank You**

25 Henderson Street, Port Hope Ontario · 905.885.0291 · info@phai.ca · PHAI.ca Follow us on Facebook, Twitter and Instagram

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