PORTHOP PROJEC

SPRING 2020



PHAI and COVID-19

An update from







Taking action to change PHAI cleanup process

In response to property owners' concerns about PHAI cleanups taking too long and unnecessarily "chasing arsenic," CNL initiated action to address these issues.

Cleanup choices for Port Hope residents

- **Cleanup verification** process revised
- **Third-party study** on health impacts of arsenic
- **Waterfront cleanup** update



NOW is the last chance to have your property tested

The window of opportunity to participate in the Port Hope Property Radiological Survey is closing.



Canadian Nuclear | Laboratories

Laboratoires Nucléaires Canadiens



PHAI and COVID-19

An update from Scott Parnell, General Manager

Like many organizations, Canadian Nuclear Laboratories (CNL) has been impacted as a result of the COVID-19 pandemic.

Since mid-March, construction and cleanup work in the field, which often requires that a number of people work in close proximity, has been suspended until it is safe to resume normal operations.

Although we have had to adjust our plans for this year's fieldwork and temporarily close our public office, we have taken steps to maintain operations wherever possible and are advancing Port Hope Area Initiative (PHAI) planning and designs while working remotely.

As the Province of Ontario begins a gradual return to normal, CNL will continue to be guided by federal and provincial governments, and by public health officials. Our return to work in the field will be phased and cautious.

We will ramp up construction activities in a safe and measured way to ensure we are meeting the additional pandemic-related safety requirements.

This means there may be further delays, with some planned work likely not happening until next construction season.

To keep you, our staff and our contractors safe, we will continue to meet with residents and property owners by conference call instead of face-to-face and to look for new ways we can safely respond to your requests and meet your needs.

We have also been working hard to provide options to residents, based on community feedback, for the PHAI cleanup on their properties. This newsletter includes details on these options.

We look forward to providing more information on the actions we have taken to change the PHAI cleanup process and how this may impact the cleanup of private properties.



In the meantime, as your community partner, every effort is being made to identify ways CNL can help support our local communities during the pandemic.

Let's continue to work together in the days and weeks ahead.

COVID-19 CONSTRUCTION JOB SITE GUIDELINES

As construction activities continue, we are following these guidelines to limit the spread of COVID-19:



Screening our staff each day before starting work.





Wearing protective personal equipment while at work.



2 m 肯 Maintaining 2 metres of social distancing as work duties permit.



Practising good hygiene by frequent handwashing.



Routinely cleaning and disinfecting all shared areas and equipment.



Cleanup choices for Port Hope residents

picturesque Port Hope attracts visitors from far and wide. Known for its heritage architecture and the Ganaraska River, the community is a desirable filming location, an ideal backdrop for photographers and artists, and a favoured destination of anglers.

Like many other towns, Port Hope has waste from its industrial past. The PHAI is the community requested solution to this longstanding environmental issue. Its mandate is to remove historic low-level radioactive waste from both public and private properties within the municipality, ensuring a legacy for the enjoyment of generations to come.

As plans for the PHAI cleanup of private properties have become a reality, a number of residents have strongly indicated to CNL that they would



like the option to restrict the cleanup of historic low-level radioactive waste to certain areas of their properties. In particular, residents are asking for an option that will allow them to preserve specific features such as trees, gardens or structures.

As the option to leave waste behind differs from the "all or nothing" approach to the cleanup envisioned during the planning stage, CNL has engaged the Municipality of Port Hope to develop a process to meet the current needs of the community.

"The PHAI is and always has been a voluntary cleanup," said Scott Parnell, CNL General Manager. "We continue to respect people's right to choose what happens on their own properties, and we are working with the municipality to ensure options are available."



These options will include opportunities for residents to fully understand the implications of their choice and the process involved. Once these options become available, property owners will have the chance to indicate to CNL if they choose either to have a full cleanup, to restrict the cleanup to certain areas of the property, or to have no cleanup at all.

The Compliance Letter issued for the property will reflect the option that is chosen and indicate if and where waste is left behind.

Choices to be offered

- Full cleanup to meet PHAI Cleanup Criteria Compliance Letter will be issued
- Limited cleanup Qualified Compliance Letter stating the type and location of waste left behind on a property will be issued
- **No cleanup** Radiological Status Letters will continue to be available for properties where the owner did not participate in the PHAI testing or cleanup

It is important to note that CNL will continue to plan for and offer all property owners a full cleanup of historic low-level radioactive waste on their properties while the PHAI project is underway.

CNL takes action to change PHAI cleanup process

The PHAI cleanup of residential properties in Port Hope began in 2018. Early experience in the field has resulted in significant learning opportunities for CNL, both in terms of the physical challenges encountered during the construction and restoration of properties and the consistent feedback from residents about the process.

Owners who have experienced a cleanup of their property have expressed concerns about the length of time it takes to complete the remediation, and about the impacts on natural and built property features resulting from the work.

To address these concerns, CNL completed a thorough review of the process and identified two major contributing factors:

- 1. The procedure to verify that a property meets PHAI Cleanup Criteria requires multiple steps and significant timelines.
- 2. The PHAI Cleanup Criteria for arsenic is set at a conservative level of 18 parts per million (ppm), to align with the generic, province-wide standard. Actual levels of arsenic in soil can vary from community to community and may be higher than 18 ppm. As arsenic moves through soil more quickly than radiological contaminants, CNL has had to "chase arsenic" after the radioactive components have been removed, often well beyond the planned excavation footprint.



Following the review, CNL engaged key stakeholders and initiated action to address both of these issues.

 CNL is evaluating a change to its approach by using a statistical method to align more closely with internationally accepted standards.

This change is based on a third-party analysis of the procedure by Oak Ridge Associated Universities, an internationally recognized authority on the subject. This



improvement, which is expected to take effect this year following acceptance from key stakeholders, will make the verification process more efficient.

2. To address the conservative value for arsenic in the PHAI Cleanup Criteria, CNL conducted research and commissioned a report to ensure that any potential change to criteria will not pose increased risk to human health or the environment.

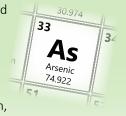
Based on the findings of the report, CNL has recommended changing the cleanup criteria value for arsenic to 100 ppm and has initiated a formal review process by the Canadian Nuclear Safety Commission (CNSC). Discussions with the CNSC, Ontario Ministry of the Environment, Conservation and Parks and the Municipality of Port Hope on this topic are continuing, and any change to criteria will require acceptance from all parties. At this time, the decision process is expected to take at least until fall 2020.

Why is CNL testing for arsenic as part of the PHAI?

The historic low-level radioactive waste in Port Hope is the result of past practices of the former Crown corporation, Eldorado Nuclear Limited. Arsenic is one waste product that was generated by Eldorado's processes, along with radiological contaminants.

Since the start of PHAI testing, CNL has collected more than 25,000 soil samples in

Port Hope and has determined that a significant number of property cleanups are being driven by concentrations of arsenic, rather than radiological contaminants, in soil. Based on this information,



CNL commissioned a health study for arsenic.

NOW is the last chance to participate in the Port Hope Property Radiological Survey

ollowing the PHAI testing of more than 4,400 properties, the Port Hope Property Radiological Survey is wrapping up in 2020.

"Now that almost all properties in the urban area of Port Hope have been tested for the presence or absence of historic low-level radioactive waste, we have shifted our main focus to the cleanup and restoration of residential properties," said Steve Whillier, Project Director.

The entire suite of tests for each property requires multiple visits and takes about two years to complete.

"To be sure we can fit every property with waste into the overall project schedule, we have to begin testing the remaining properties by the end of 2020," said Whillier.

Over the next few months, CNL will be mailing letters to all property owners that have not yet agreed to participate in the radiological testing. The letters include specific instructions and timelines for people to either participate in or opt out of the testing. Declining to participate in the testing will result in the property not being eligible for the federally funded cleanup.

"Don't wait. This is the last chance for people to participate in this voluntary program. Anyone who



does not submit their signed access agreement will not be able to have their property tested or cleaned up as part of the PHAI in the future," stressed Whillier.

Property owners who would like to participate in the testing or cleanup should contact CNL today.

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Waterworks East

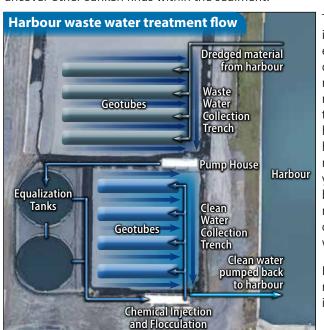
Beach is complete. Removal of underground tanks was put on hold during the pandemic shutdown. This work and restoration will continue when it can be safely completed under COVID-19 restrictions.

Port Hope Harbour

ork related to the cleanup of the Port Hope Harbour began in 2018 with preparatory activities for dredging. Electrofishing of the inner harbour to remove fish from the work area was completed, followed by installation of a wave attenuator intended to isolate the work area from the lake. The work then focused on shoring and bracing of the existing harbour walls to facilitate dredging.

Dredging began in 2019

with the removal of bulk obstacles including two vehicles. CNL expects to uncover other sunken finds within the sediment.



Though the items are expected to deteriorate rapidly once removed from the place that has been their home for a number of years, they will be carefully monitored and controlled by workers onsite.

Dredging will resume when it is safe to do so.





All contaminated material is transported to the Port Hope Long-Term Waste **Management Facility for safe storage.**

Caring for our community

As the world defines a new normal, many people are finding ways to create a silver lining in these tumultuous times. Companies of all sizes are doing their part to help their communities get through this pandemic, including CNL.

As a leading science and technology organization, CNL's sites are home to unique and innovative facilities, laboratories, equipment and expertise. We have identified ways in which these unique capabilities can be used to help Canada respond to the pandemic, whether through the supply of in-demand equipment, resources or creative out-of-the-box thinking.

Port Hope

In Port Hope, where many of our staff live and work, a task force sprang into action helping Northumberland Fare Share's Port Hope food bank and the Port Hope Salvation

Army with the storage and distribution of a large donation of non-perishable food. Much-needed gloves (inset) were donated to the Northumberland Hills Hospital.

In addition, CNL's parent company, Canadian National Energy Alliance, made cash donations to the food banks serving areas around its sites.

Across Canada



the world, to develop an easy-to-produce ventilator using off-the-shelf readily accessible parts. The goal is to develop a model to meet current needs that can be constructed quickly and reliably in Canada.

From supplies to new and innovative solutions, we will keep investigating ways we can contribute to the fight against COVID-19.

We continue to look at how our employees can help through resources and possible solutions to longer-term community issues.

If you think we can help meet a special need related to the pandemic, please connect with us at info@phai.ca or 905.885.0291.

Let's continue to work together. Stay safe.



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