



PORT HOPE AREA
INITIATIVE



Continuing the Port Hope Project

CNL Application to Renew PHAI Licences

CNSC Licence Hearing
November 22, 2022

Best Western Plus
930 Burnham Street, Cobourg
(and virtual via Zoom)



Canadian Nuclear
Laboratories

Laboratoires Nucléaires
Canadiens

September 2022

CNL application to renew the PHAI Licences

Canadian Nuclear Laboratories (CNL) has submitted an application to the Canadian Nuclear Safety Commission (CNSC) for a 10-year renewal of the Port Hope Project Waste Nuclear Substance Licence to enable CNL to continue the cleanup and placement of historic low-level radioactive waste in safe, long-term storage.

As part of its application, CNL has requested a licence to continue remediation work in Port Hope, and to conduct environmental monitoring and site maintenance activities at the long-term waste management facility in Port Granby.

The CNSC will evaluate the licence application at a hearing scheduled for November 22, 2022.

The hearing is a public process; anyone can participate by submitting an intervention, in writing or with a written submission and oral presentation at the hearing.

CNSC Commissioners will hear presentations from both CNSC and CNL staff as well as from oral intervenors. CNL encourages everyone to participate in the process and share their experiences with the PHAI.

The deadline to request an intervention through the CNSC is October 14, 2022.

For complete information on how to participate in the public hearing, visit the [CNSC website](https://www.nuclearsafety.gc.ca) at www.nuclearsafety.gc.ca

“CNSC staff conducted an overall assessment of CNL’s compliance with the Nuclear Safety and Control Act and its regulations during the current licence period (2012-2021) and concluded that CNL has programs, resources, and measures in place to ensure the health and safety of persons and the environment and of the measures related to security and Canada’s international obligations during the proposed licence period.”

- CNSC Commission Member Document, 2022

The Port Hope Area Initiative

The PHAI includes the cleanup and local, long-term, safe management of historic low-level radioactive waste in the municipalities of Port Hope and Clarington. The waste is the result of the refining practices of the former Crown Corporation, Eldorado Nuclear Ltd., and its private sector predecessors. The original Eldorado refining operation and plant were established in the 1930s without consultation with Indigenous peoples of the area.

The **Port Hope Project (PHP)** involves the construction of a new long-term waste management facility and the removal of historic waste from various public and private (residential/business) sites in the Municipality of Port Hope.

As of September 2022, approximately 1.4 million tonnes of historic waste has been excavated from several sites in Port Hope and safely placed in the new engineered storage mound as remediation and restoration work continues.

Commission Member Documents

CNSC and CNL staff have each submitted a Commission Member Document (CMD) to the CNSC Commission. The information in the CMDs will be discussed at the hearing on November 22, 2022.

The Canadian Nuclear Laboratories CMD

demonstrates operating performance and ongoing commitment to safety and environmental protection for the current licensing period and outlines plans to continue work on the PHAI under a renewed, combined CNSC licence.

The Canadian Nuclear Safety Commission CMD

provides an evaluation of CNL performance under the current licence and recommendations to the Commission related to CNL’s application.

This document contains key details of the CNL CMD. Excerpts from the CNSC staff CMD are included for ease of reference.

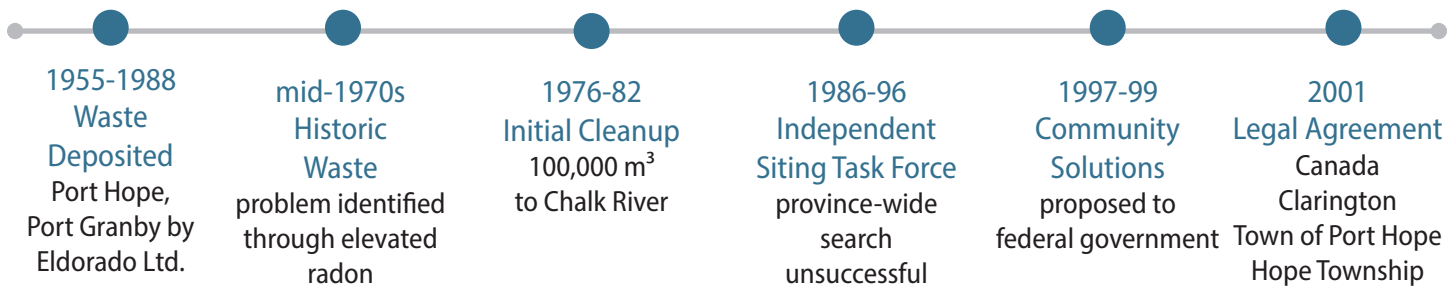
Both CMDs are posted in full on the CNSC website and available through [PHAI.ca](https://www.nuclearsafety.gc.ca).

The path to a solution

The PHAI represents the Government of Canada’s commitment to a community-requested solution for the safe management of historic low-level radioactive waste.

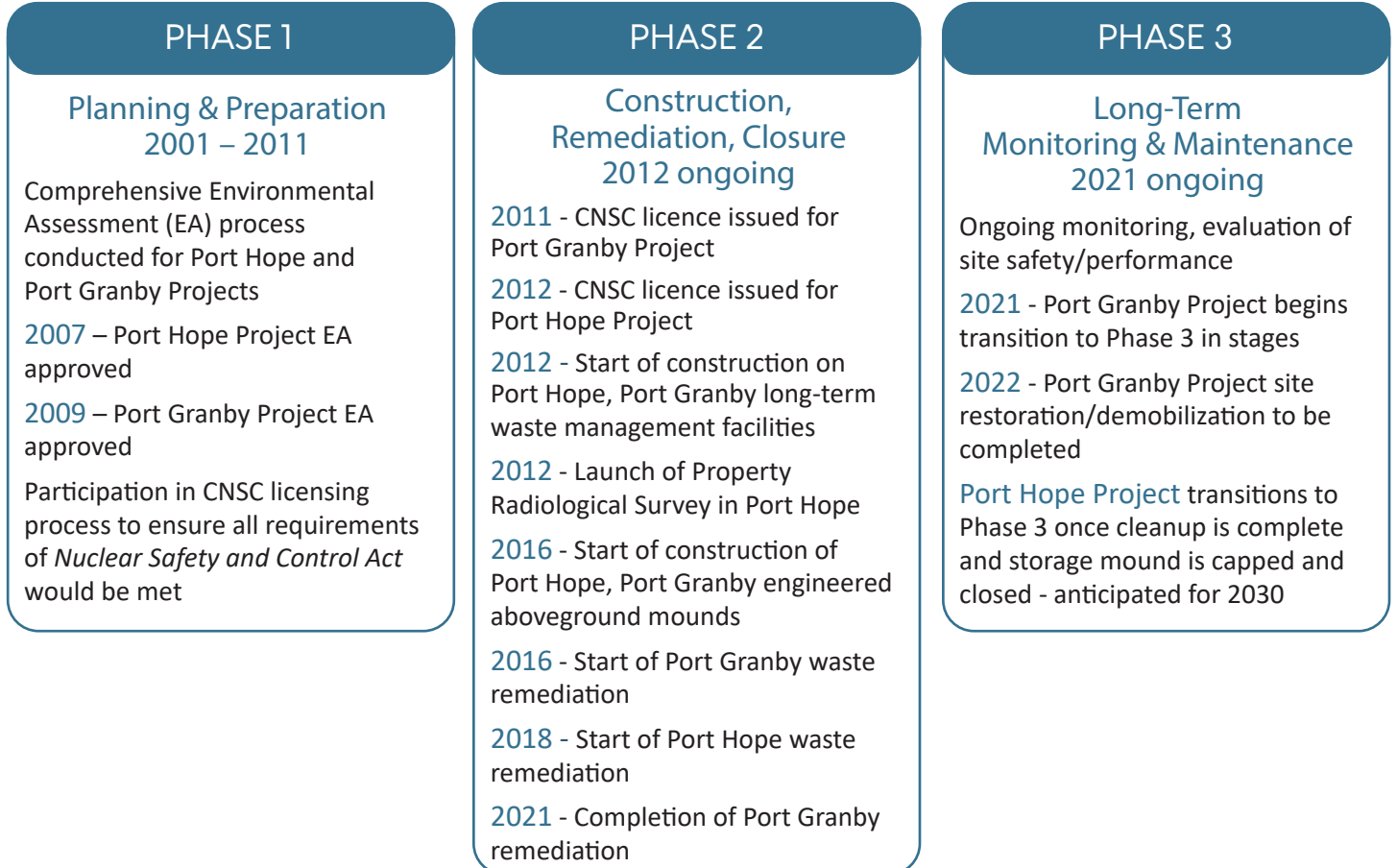
The federal government oversaw an initial cleanup in Port Hope during the mid-1970s, however, a long-term solution was required for the remaining waste. When a province-wide search for long-term storage was unsuccessful, the communities put forward concepts to store the waste within Port Hope and Port Granby.

The signing of the Legal Agreement in 2001 launched the PHAI, stipulating that Canada clean up historic waste so that all such properties can be used for ‘all current and foreseeable unrestricted uses.’



Phased project implementation

The signing of the Legal Agreement in 2001 launched the PHAI which is being completed in three phases.



Safety & Control Areas

Safety and Control Areas (SCAs) enable the CNSC to confirm regulatory requirements, expectations and safety measures in CNL’s management, facility, equipment, core controls and processes.

CNL maintains robust functions and operations that meet all required SCAs outlined in the current PHAI licences.

Strict adherence to these requirements ensures that CNL achieves all objectives safely and consistently.

CNL will continue to evolve as required to meet changes to regulatory requirements.



Protecting people and the environment

CNL’s primary objective is the safety of people and protection of the environment. The environmental assessments, launched in 2001, involved a comprehensive evaluation of potential biophysical and socioeconomic impacts of the proposed projects and proposed mitigation measures to help to reduce, eliminate or control adverse effects. It was concluded that, with the identified mitigation measures in place, the projects are not likely to cause significant adverse environmental effects.

Health and safety

Health and safety are core CNL values, reflected in an unyielding commitment to meet all health and safety obligations and continually improve. CNL strives for a culture of safety excellence through practical application, training, awareness campaigns and initiatives and empowering all employees to make conservative decisions, guided by safety.

CNL monitors performance against conventional health and safety requirements and extensive work has been completed through the current licence period to improve the rigour and tracking of these measures across the PHAI.

“CNL continues to implement and maintain a conventional health and safety program in accordance with regulatory requirements that is adequate to support the activities authorized in the licence.

No proposed improvements were noted.”

- CNSC Commission Member Document, 2022

Environmental protection

CNL maintains a robust environmental protection program for all operations and activities in and around PHAI sites including monitoring for air quality, dust, noise, surface/ground water, soil, and socio-economic impact. Environmental monitoring data is reported regularly and made publicly available

The program applies to all work conducted by employees, contractors, consultants, etc. and is subject to regular inspections, maintenance activities and institutional controls.

“No improvements needed for CNL’s environmental protection program.”

-CNSC Commission Member Document, 2022

PHAI Indigenous engagement

Indigenous engagement is a critical component of the PHAI and ongoing dialogue with Indigenous communities and organizations assists CNL in refining engagement based on their interests and needs.

Engagement activities include meetings, information sharing, site tours and opportunities for observation and field demonstrations of project activities. The PHAI archaeological protocol ensures that Indigenous cultural heritage monitors are engaged and Indigenous communities notified should any items of potential archaeological, Indigenous or cultural heritage significance be uncovered during PHAI work.

Communications, plans and reporting are enhanced with balanced language and acknowledgment of Indigenous constitutional rights and perspectives as CNL works toward the integration of Indigenous Knowledge into project planning and activities.

CNL continues to work with Indigenous communities and organizations to further enhance inclusion and participation through the development of PHAI Indigenous Communications & Engagement Program.

Indigenous Communities with Treaty Rights

- Alderville First Nation
- Curve Lake First Nation
- Hiawatha First Nation
- Mississaugas of Scugog Island First Nation
- Beausoleil First Nation
- Chippewas of Georgina Island First Nation
- Chippewas of Rama First Nation

Indigenous communities/organizations with interests

- Mohawks of the Bay of Quinte
- Anishinabek Nation
- Métis Nation of Ontario, local Métis Councils

“CNSC staff are satisfied with CNL’s approach to Indigenous engagement.

CNSC staff are pleased to see that CNL is developing a PHAI Indigenous Communications and Engagement Program.”

- CNSC Commission Member Document, 2022



PHAI Public Information Program

The PHAI Public Information Program ensures effective communication with the Port Hope and Port Granby communities to build and maintain confidence in CNL and the PHAI. An adaptive approach allows CNL to proactively share information and remain responsive to a diverse audience including residents, property owners, businesses, municipalities, media and special interest groups.

CNL is committed to sharing information in a manner that earns public trust, identifies and understands issues and values, and builds and maintains community acceptance and support of the PHAI.

Ongoing dialogue and opportunities to provide feedback ensure that the communities are knowledgeable about upcoming work and project activities and questions, issues and concerns are identified and addressed.

“The PHAI Public Information Program is the gold standard on which all other licensees should model their efforts.”

- CNSC Regulatory Oversight Review, 2020

“CNL made reasonable efforts to keep targeted audiences, including the public and other stakeholders, informed about the PHAI and address project-specific issues and concerns raised.”

- CNSC Commission Member Document, 2022

Application to renew and consolidate CNSC licences

CNL has applied to the CNSC to renew the Port Hope Project Waste Nuclear Substance Licence for 10 years and consolidate that licence with three existing licences. This will allow CNL to reduce the administrative burden of holding separate licences for similar projects and continue the cleanup of historic waste in Port Hope and maintenance and monitoring of the Port Granby facility into Phase 3.

Port Hope Project Waste Nuclear Substance Licence

- Construction: Port Hope Long-Term Waste Management Facility
- Relocation of historic waste from former Welcome Waste Management Facility
- Excavation, restoration various Small-Scale Sites, large-scale sites, select industrial sites in Port Hope
- Expires December 31, 2022



Pine Street Extension Temporary Storage Site Licence

- Used until 2018 to store waste removed through the Construction Monitoring Program
- Currently houses temporary storage bins for residual amounts of impacted soil/equipment from off-site remediation activities
- Asphalt pads used as staging areas for Highland Drive Landfill area remediation activities



Port Hope Radioactive Waste Management Facility Licence

- Pine Street Extension Consolidation Site
- Strachan Street Consolidation Site
- Sewage Treatment Plant Temporary Storage Site
- Temporarily stored historic waste until new facility open
- All waste has been transferred to new facility
- Site restoration complete or nearing completion



Port Granby Long-Term Low-Level Radioactive Waste Management Project Licence

- Construction of long-term waste management facility
- Remove historic waste from former waste management facility
- Transportation of waste to new facility
- All waste placed in engineered storage mound - capped/closed
- Transitioning to long-term monitoring/maintenance
- Expires on December 31, 2022



PHAI Project milestones

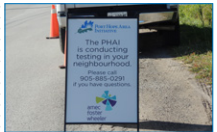
2012



Start of construction Port Granby Project Waste Water Treatment Plant



Start of construction Port Hope Project Waste Water Treatment Plant



Launch of Port Hope Property Radiological Survey

2016



Construction of Port Granby facility and storage mounds



Start of waste placement in Port Granby storage mound

2017



Construction of Port Hope waste management facility and storage mound



Start of waste placement in Port Hope storage mound

2018



Centre Pier Temporary Storage Site removed



Pine St. North Temporary Storage Site removed



Peter Street Mound remediated/restored

2019



Sewage Treatment Plant Temporary Storage Site removed/restored



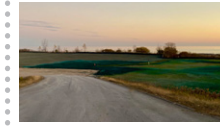
Sewage Treatment Plant Storage Cell remediated

2020



Port Granby waste removal complete

2021



Waterworks East remediated, restored



95 Mill Street S. remediated, restored



Port Granby mound capped and closed

2022



Pine Street North Consolidation Site remediated, restored



Launch of Small-Scale Sites remediation (47 sites remediated and restored)

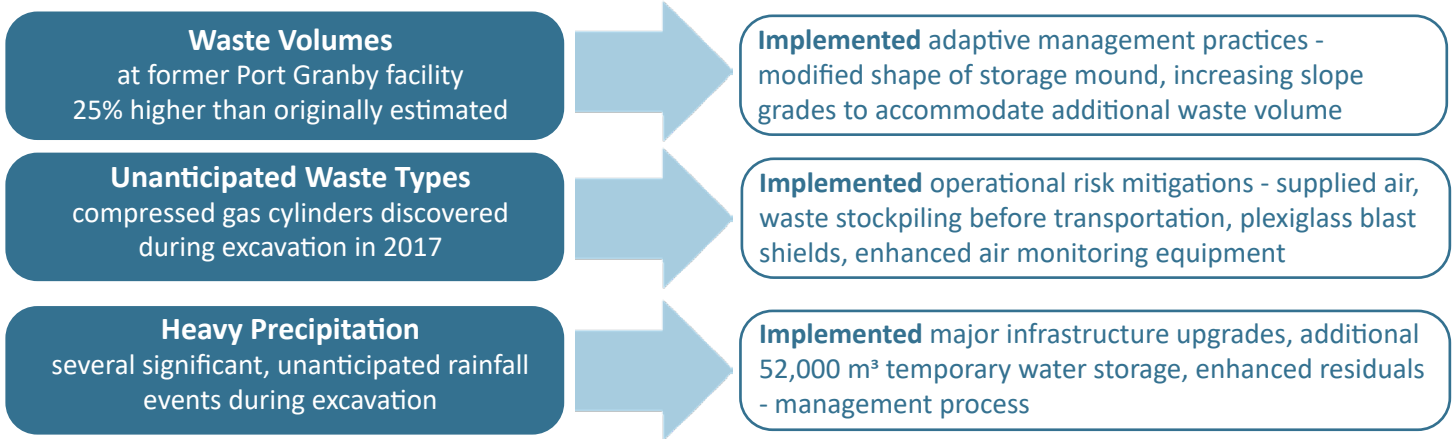
Lessons learned

During the environmental assessment process, it was recognized that conditions during project implementation may differ slightly from what had been planned and predicted. An adaptive management approach was adopted to allow for continuous improvement of environmental management practices by learning from their outcomes. The PHAI Environmental Assessment Follow-up Program evaluates environmental conditions and, if necessary, implements new or improved mitigation

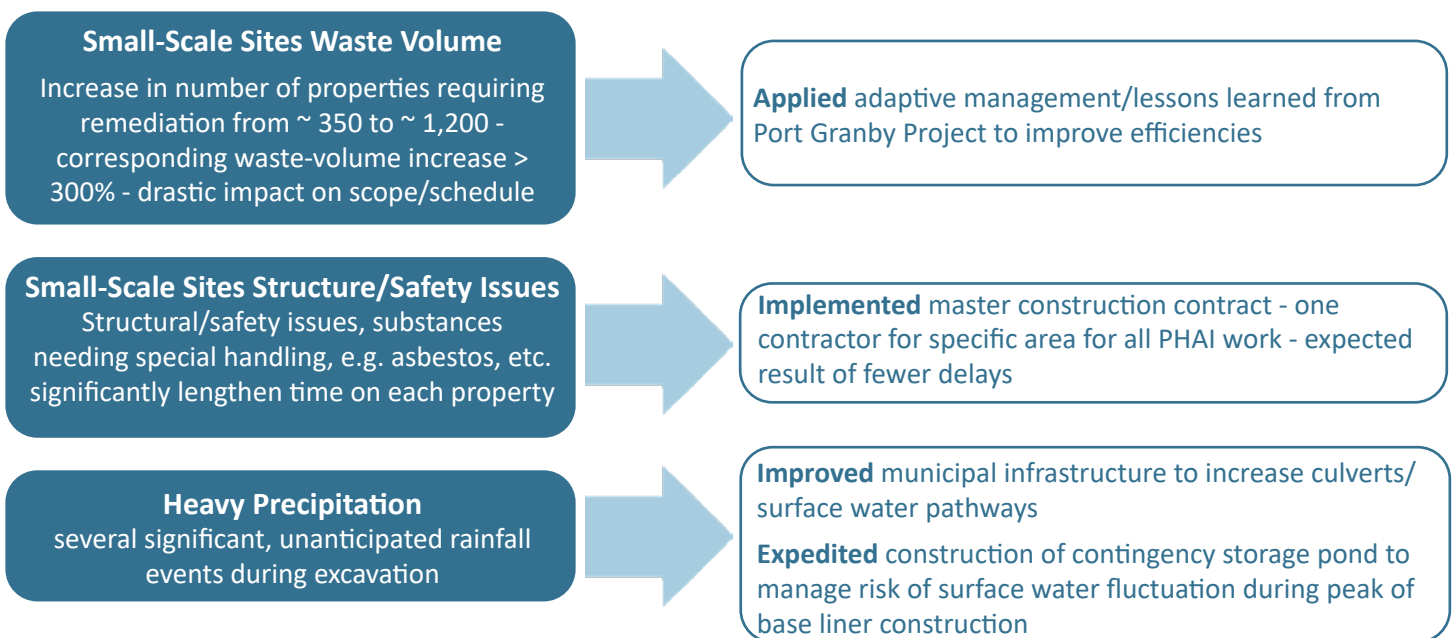
measures in response to changes in those conditions. Programs are routinely evaluated and scopes adjusted to consider project elements like changing site conditions or the need to re-focus on specific operational or environmental issues of uncertainty or concern.

As part of CNL's commitment to continuous improvement, lessons learned during project implementation are applied in other areas to mitigate potential issues from similar conditions.

Port Granby Project



Port Hope Project



Continuing the Port Hope Project

Work continues at several sites in Port Hope and preparations will begin at new sites in the fall of 2022.



Port Hope Harbour remediation ongoing



CN/CP Viaducts remediation underway



Strachan Street Ravine site restoration



Chemetron Lagoon site preparation



Lions Recreation Centre Park site preparation



Highland Drive Landfill Area Site Prep



Small-Scale Sites: testing, design, remediation, restoration

Port Hope Project upcoming work

In the next licensing period, work on the Port Hope Project will continue with the Property Radiological Survey testing remaining properties and the remediation and restoration of those residential properties impacted with historic waste.

Work will begin on site preparation, remediation and restoration of remaining sites impacted with historic waste including the Abandoned Pipeline, Former St. Mary's School and Caroline Street Park; Waterworks West, Alexander Street Ravine and Centre Pier and at the Highland Drive Landfill and Highland Drive South Ravine.

The Former Coal Gasification Plant, impacted with industrial waste, will be remediated and the land restored.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
SURVEY	Property Radiological Survey Campaigns 1-5			LONG-TERM WASTE MANAGEMENT FACILITY						Long-term monitoring and maintenance after mound closure	
	Waste Placement									Mound cap and close	
REMEDATION	Residential Properties Known Sites (Abandoned Pipeline, Former St. Mary's School, Caroline Street Park)										
	Waterfront Area Sites (Waterworks West, Alexander Street Ravine)										
	Centre Pier (including Cameco waste)										
	Highland Drive Sites (Highland Drive Landfill, Highland Drive South Ravine)										
	Industrial Sites (Former Coal Gasification Plant)										

Schedule based on information as of June 2022 and subject to change

CNL remains committed

CNL is committed to completing the projects safely and compliantly, meeting regulatory requirements while ensuring the safety and protection of people and the environment.

A robust management system is in place to support the implementation of the PHAI while ensuring continuous learning and improvement.

CNL has safely and effectively moved 1.3 million tonnes of historic waste from the former Port Granby Waste Management Facility and capped and closed the engineered storage mound. Close to 1.4 million tonnes of waste has been removed from several sites in Port Hope and lessons learned from the Port Granby Project are being applied to the Port Hope Project, utilizing effective management practices to evaluate and manage the PHAI project.



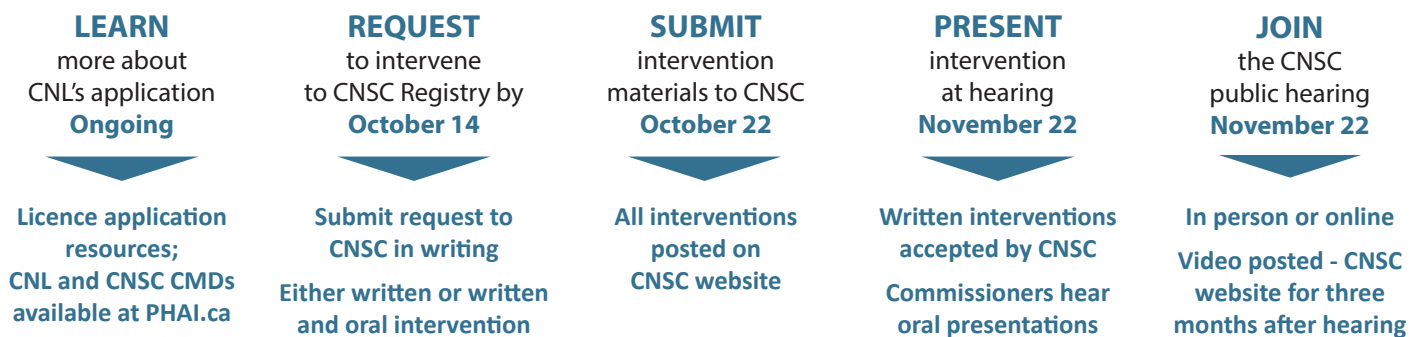
The information presented in the *CNL Commission Member Document* demonstrates solid operating performance and an ongoing commitment to the safety of people and protection of the environment under the existing licences from 2012 to 2022.

“CNSC staff concluded that CNL is qualified to carry on the activity authorized by the licence and will, in carrying out that activity, make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.”

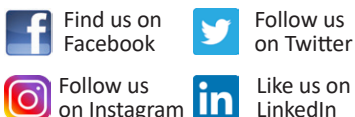
- CNSC Commission Member Document, 2022

Participate in the process

The CNSC licence hearing takes place on **November 22, 2022 at the Best Western Plus, 930 Burnham Street, Cobourg, Ontario** (and virtual via Zoom). The hearing will be webcast live and available on the CNSC website at nuclearsafety.gc.ca.



CNL's Historic Waste Program Management Office and the Port Hope Area Initiative projects are situated on the traditional lands of Indigenous Peoples dating back countless generations. It remains the home of the Anishinaabe people and is part of the Williams Treaties territory of the Mississaugas and is also home to Indigenous Peoples from across the region. We are grateful to have the opportunity to work on all of these lands and near traditionally and culturally significant waterways.



HISTORIC WASTE PROGRAM MANAGEMENT OFFICE

25 Henderson Street, Port Hope, ON L1A 0C6
905.885.0281 • PHAI.ca • info@phai.ca