PORT HOPE AREA INITIATIVE

Port Granby Project
NEWSLETTER

FALL 2020

Port Granby Waste Removal Complete

Port Granby Legacy Waste Management Facility

Canadian Nuclear Laboratories (CNL) has completed the excavation and transfer of historic low-level radioactive waste away from the Lake Ontario shoreline in Southeast Clarington.

The placement of the last truckloads of waste in the aboveground mound at the new long-term waste management facility, located about 700 metres north of the shoreline site, marks a milestone for the Port Granby community and the Port Hope Area Initiative (PHAI). CNL is implementing the PHAI on behalf of Atomic Energy of Canada Limited (AECL), a federal Crown corporation.

"I want to thank the residents of Port Granby for their support and patience during the decades of community consultation and planning, followed by remediation and restoration in the heart of their rural community," said Richard Sexton, President and CEO of AECL. "I am very pleased that CNL and its contractors have fulfilled the Government of Canada's commitment to the Municipality of Clarington to clean up the lakefront site and place the waste in safe, long-term storage," he said.

Remediation of the legacy waste management site began in 2016 and was undertaken in sections with each section undergoing a stringent verification process to confirm that all contaminated material had been excavated. Verified areas were then backfilled with clean soil and restored with sod and vegetation. As the cleanup neared completion, internal roads and other infrastructure were removed.

Of the 1.3 million tonnes of waste that was removed, a small volume of marginally contaminated shallow soil - estimated at 800 cubic metres - was left undisturbed in the bluffs. The location and instability of the area would have required significant excavation and removal of a large area of trees and brush. Studies have confirmed that this waste does not pose a notable environmental hazard or risk.

"The primary goal of the PHAI is the remediation and restoration of the land, leaving the environment in an improved condition," said Scott Parnell, General Manager of CNL's Historic Waste Program. "With the historic waste removed from the shoreline and safely stored, generations to come will enjoy the benefits of a cleaner environment."

Hydroseeding will continue across the entire site

PHAI and COVID-19

An update from Scott Parnell, General Manager

Like many organizations, CNL has been impacted by the COVID-19 pandemic, with construction and cleanup work suspended in mid-March.

Since July, CNL has been restarting activities by following the guidance of provincial and federal governments, as well as public health authorities.

Work at the Port Granby Project sites resumed in a cautious, phased approach, and included the cleaning and maintenance of the water collection ponds at the long-term waste management facility, as well as capping and closing sections of the aboveground mound.

The removal of the last of the waste from the legacy site was almost complete when work was suspended in March.

To allow our contractor to regain some of the time lost and finish the remediation this year, hours of work have been lengthened. Crews are now on site weekdays from 6 a.m. to 10 p.m., with occasional weekend work occuring when needed. This extended schedule is expected to continue for the rest of 2020, with measures in place to reduce light and noise disturbance for neighbouring residents.

Even with longer work hours, some planned work will be delayed, including the final capping and closing of the storage mound, which will now take place in the 2021 construction season.

While CNL offices remain closed to public visitors, our staff continues to be available by email and phone to respond to your questions and provide information about the PHAI.

The latest project news can be found at PHAI.ca and on PHAI social media feeds.

Port Granby Project Waste Water Treatment in action

The Port Granby Long-Term Waste Management Facility (LTWMF) includes a dedicated waste water treatment plant that plays an important role in the safe, long-term storage of low-level radioactive waste. The plant is equipped with advanced technologies to treat surface water and groundwater during construction of the storage mound and remediation of the legacy waste management site. Once treated, clean water is discharged back to Lake Ontario. Solid material removed from the water is safely transported to another licensed facility to meet regulatory requirements. The plant will continue to treat contaminated water from within the mound after it is capped and closed.

Waste Water Treatment Plant

With higher-than-average rainfall over the course of the project, CNL's contractor installed temporary lake tanks at the plant site to provide additional effective storage of contaminated water. The backlog of water stored in these eight tanks - approximately 40 million litres in total - was processed by the plant in 2019, and the resulting clean water was released into Lake Ontario.

With remediation now complete, six of the eight lake tanks are being removed and upgrades implemented to improve long-term monitoring systems and enhance tracking of future rain events and water in-flow.

Commissioned in 2016, the plant's treatment process ensures the clean water being discharged to Lake Ontario meets or exceeds stringent requirements, resulting in enhanced protection of the Great Lakes Basin ecosystem.

Visit PHAI.ca for an in-depth overview of the water treatment process.

Lake tanks

Next Steps for the Port Granby Project

Final layer (topsoil) being placed on Cell 2 of aboveground storage mound

Capping and closing of the engineered storage mound at the Port Granby LTWMF is underway. The mound comprises two separate cells housing the low-level radioactive waste; each cell is being capped with multiple layers of natural and manufactured materials.

Cell 2 waste placement and capping is complete, with hydroseeding in place to protect against erosion over the winter months. Grading and shaping of the waste in Cell 1 is expected to be completed this fall.

The mound is expected to be complete in summer 2021, following the installation of the final cover - approximately 2.75 metres thick - on the entire mound. The cover will include a capillary drainage layer system to safely encapsulate the waste, provide additional protection against moisture infiltration and inadvertent intrusion, and reduce levels of gamma radiation on the surface of the mound to background, similar to elsewhere in this area of Southern Ontario.

Dedicated systems are being installed within the mound and around the perimeter of the LTWMF site to closely monitor the safety and performance of the facility for hundreds of years into the future.

Completion work in summer 2021 will include the removal of internal site roads and the Lakeshore Road overpass, and the realignment of that road. Final landscaping and demobilization is targeted for summer 2022.

Groundwater Treatment Continues

While removal of historic waste at the Port Granby Legacy Waste Management Site has been completed, some work at the site continues, including decontamination of heavy equipment, backfilling, placing topsoil and hydroseeding.

Due to the migration of marginally contaminated groundwater in the East Gorge area, a dedicated long-term collection system is being installed to capture groundwater and pump it to the waste water treatment plant for treatment.

The system will continue to operate and be regularly monitored until the groundwater flow reaches background levels, which will likely take several decades.

Installation of groundwater collection system

CNL proposes change to Port Hope Licence


Remediation on Port Hope property

Historic low-level radioactive waste in the Port Hope area is being cleaned up to meet the PHAI Cleanup Criteria as set out in the Waste Nuclear Substance Licence issued by the Canadian Nuclear Safety Commission (CNSC) at the start of the project.

Based on its experience remediating properties in Port Hope since 2018, CNL has determined that the very conservative levels of arsenic and uranium in the cleanup criteria are resulting in more extensive and lengthy cleanups than originally anticipated. In addition, analysis has shown that the current criteria will create significant unintended project impacts, including a noticeable loss of trees in the municipality, unless changes are made.

After listening to consistent feedback from property owners and residents who have experienced PHAI cleanups at their properties, as well as more general public concerns about the predicted impact of the PHAI on the natural environment, CNL submitted an application to the CNSC requesting a change to the criteria.

The proposed changes to the PHAI Cleanup Criteria would continue to leave remediated land in a condition suitable "for all current and foreseeable unrestricted uses" as stipulated in the Legal Agreement that provides the framework for the project.

CNL has launched a comprehensive public engagement program to increase community awareness and to collect public feedback on the proposed changes. A formal CNSC hearing to review the matter is expected to be held in spring 2021.

For more information visit PHAI.ca.

Connecting with the community

Through the PHAI Public Information Program, CNL keeps Port Granby residents and the broader community updated on project progress with effective access to timely information about the project.

In September, CNL provided annual project updates to Municipality of Clarington Council and the Durham Nuclear Health Committee that included an overview of work completed in the past year and a look ahead view at work to come. In the same month CNL hosted a quarterly meeting of the Agreement Monitoring Group for the municipalities of Port Hope and Clarington, along with Atomic Energy of Canada Limited, to review project commitments and actions. In October, a semi-annual meeting of the Port Granby Citizen Liaison Group will be held to hear community perspectives about the cleanup and gather valuable feedback that assists CNL in developing effective communications for the Port Granby area.


Durham Nuclear Health Committee - 2019

CNL's robust outreach program also includes presentations and tours for community groups, stakeholders, government representatives and education institutions.

Although our communications looks a little different this year due to COVID-19 precautions, we are able to continue with many of these engagements virtually. Members of the public are always encouraged to connect directly with CNL – by phone or by email – with any questions and/or concerns about the project.

Current project information is also available on the PHAI.ca website and our social media channels.

Port Hope Area Initiative

Historic Waste Program Management Office
Tel: 905.885.0291 • Fax: 905.885.9344 • PHAI.ca • info@phai.ca