

Building the future of nuclear through responsible waste disposal



Canadian Nuclear
Laboratories

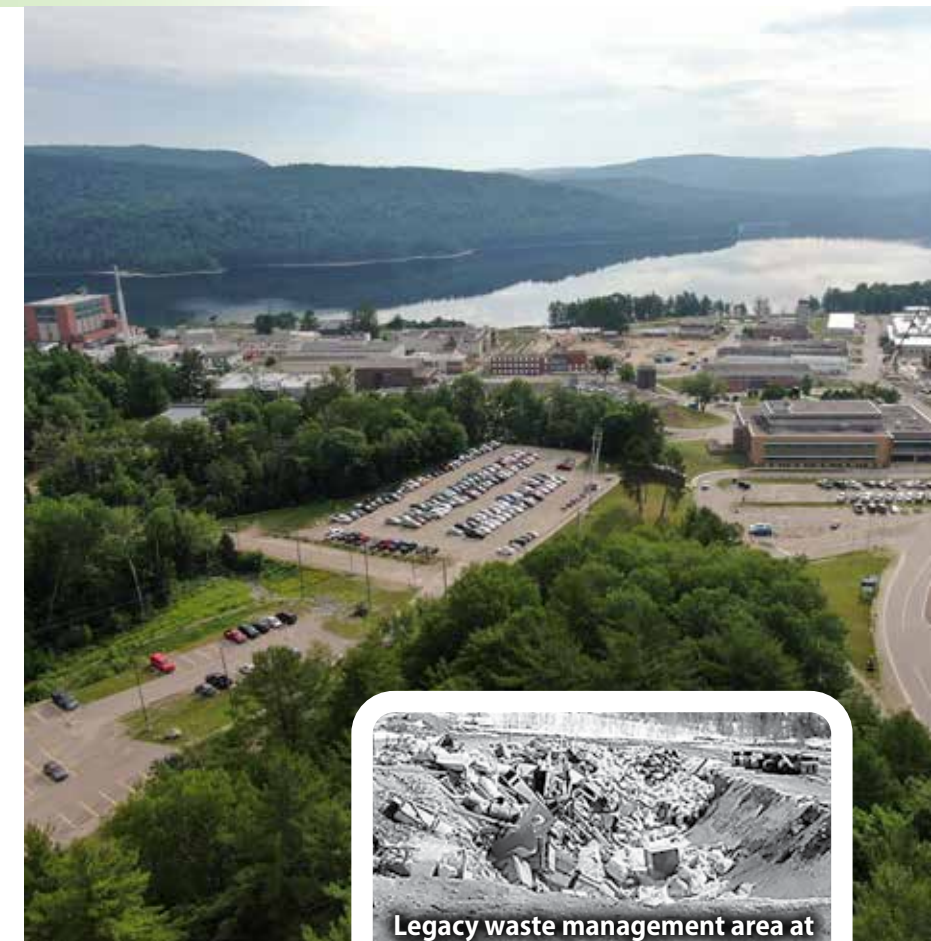
Laboratoires Nucléaires
Canadiens

Plans have been laid for the construction of a highly engineered radioactive waste disposal facility in Chalk River, Ontario, Canada. The facility is being proposed as a permanent and modern technological solution to an environmental issue that goes back almost a century.

Today, Canadian Nuclear Laboratories (CNL) is seeking the support of the industry and its supply chain to move this project forward and advance the future of waste disposal in Canada.

Canada's storied Chalk River Laboratories (pictured right) was established in 1944 on the Ottawa River, about 180 km (114 miles) from the City of Ottawa. An adjacent community, the Town of Deep River, was developed to support the site and remains home to generations of employees. The site is located on the traditional and unceded territory of the Algonquin Nation.

CNL is once again using leading-edge technology to put forward a long-term environmental solution. Taking guidance from domestic and international experience, CNL has proposed an engineered containment mound – the Near Surface Disposal Facility, or NSDF – as the solution for low-level radioactive waste at Chalk River Labs.



Legacy waste management area at Chalk River Laboratories - 1960s

Waste management is a challenge facing the entire nuclear industry.

At CNL, we are committed and prepared to implement this modern solution to an old environmental problem.



Artist's rendering of NSDF closure phase

As a fundamental component in the revitalization of the Chalk River campus, the NSDF is critical to both the long-term protection of the environment and to the continued development of breakthroughs in nuclear science and technology.

"Chalk River Laboratories is undergoing a transformative change that will propel CNL into the forefront of nuclear research in Canada and the world. The Near Surface Disposal Facility is key to this revitalization," said Kristan Schruder, CNL Deputy Vice President of Environmental Remediation Management.

The proposed facility will include the construction of a highly engineered containment mound, site infrastructure and waste water treatment facilities. The project is estimated to cost C\$365 million. A skilled workforce of 225 to 300 people will be needed to build it from the ground up. If CNL's proposal is approved by Canada's nuclear regulator, the Canadian Nuclear Safety Commission, construction of the NSDF is anticipated to start in the fall of 2022.

If CNL's proposal is approved by Canada's nuclear regulator, the Canadian Nuclear Safety Commission, construction of the NSDF is anticipated to start in the fall of 2022.



Artist's rendering of NSDF waste water treatment plant



The NSDF is designed to be protective of the Ottawa River

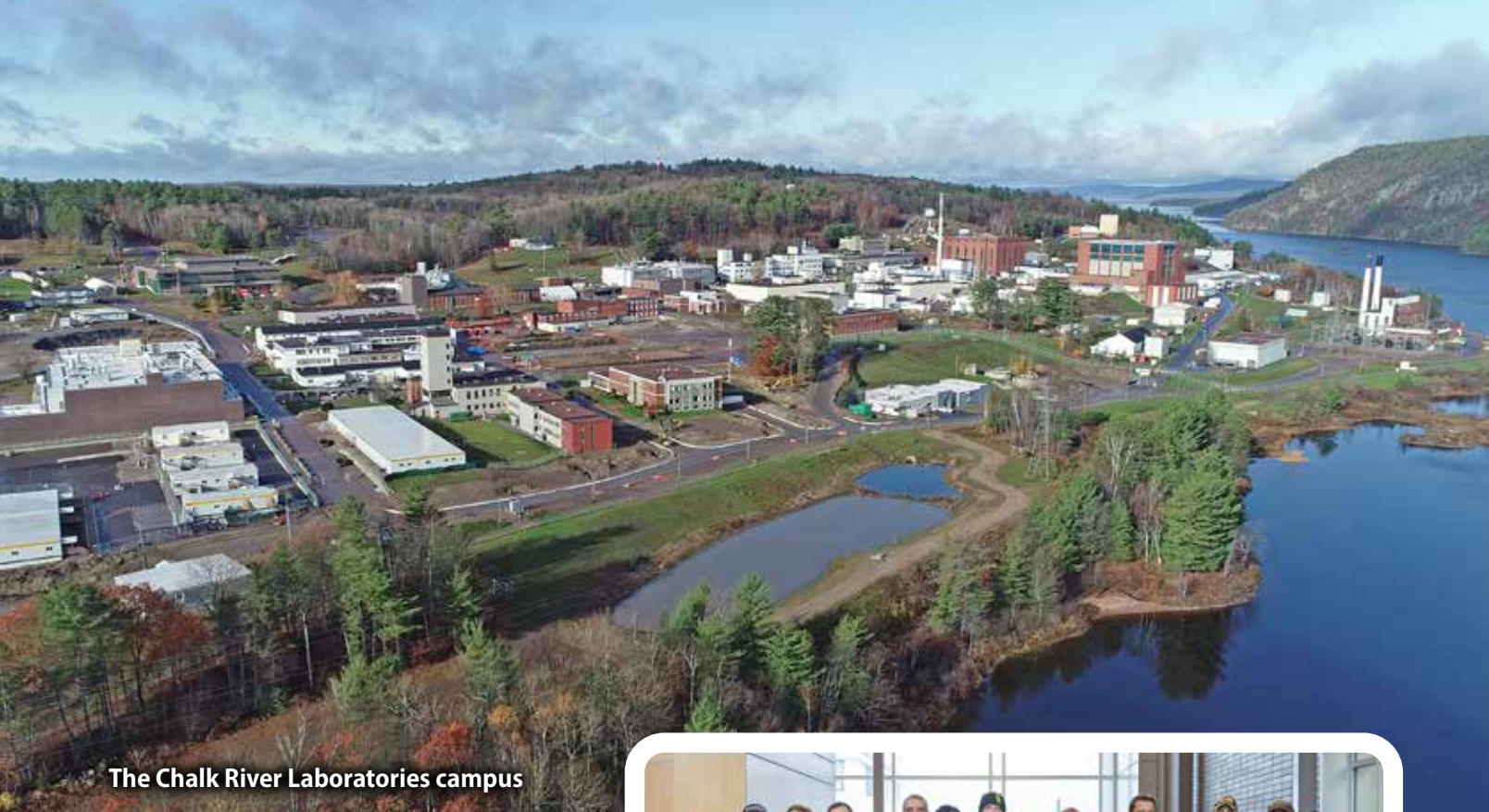


Artist's rendering of NSDF operations phase

CNL has successful experience with the engineered containment design through the construction and operation of waste management facilities in the two Southern Ontario communities of Port Hope and Port Granby, located about 100 km (60 miles) east of Toronto on Lake Ontario. In 2021, CNL completed the closure of the engineered aboveground mound in Port Granby, with 1.3 million tonnes (1.4 million tons) of contaminated soil and industrial waste placed in the mound for safe, long-term storage.



Completed Long-Term Waste Management Facility - Port Granby, Ontario, Canada



The Chalk River Laboratories campus

The design technology specific to the NSDF has been tested extensively. The facility will use natural and synthetic barriers that work together to isolate the waste from the environment for generations. Testing on the synthetic geomembrane done at Queen's University concluded the membrane will stay intact for more than a thousand years – much longer than the time it will take for the radioactivity contained in the facility to decay to a safe level.

The NSDF proposal is nearing the end of a five-year, federally regulated environmental assessment and the Canadian Nuclear Safety Commission has scheduled a public hearing starting in May of this year to consider CNL's proposal. Anyone can participate in the hearing process by submitting a written intervention or letter of support to the Commission by April 11.



**Let's use our
know-how to build
a better future,
together
– say YES to NSDF.**



Canadian Nuclear Laboratories | Laboratoires Nucléaires Canadiens