



Algonquins of Ontario

Information Session with Canadian Nuclear Laboratories

Transforming the Chalk River Laboratories Learn more about the Near Surface Disposal Facility and Nuclear Power Demonstration Closure Projects

Monday, June 19, 2017

6:00 PM – 9:00 PM

(Presentation at 7 PM)

**Clarion Hotel and Conference Centre
900 Pembroke St. East, Pembroke, ON**

Canadian Nuclear Laboratories (CNL) is hosting an Information Session so that we may learn more about the transformation plans at the Chalk River Laboratories, including proposed advances in waste management practices. Currently, there are several waste management areas at Chalk River, where waste from decades of research and development are stored and maintained in temporary facilities. An overview of these two projects can be found in the enclosed summaries.

Please join us to learn more about these projects and to provide your feedback. For more information or to stay informed on activities related to these projects contact CNL at communications@cnl.ca, call 1-800-364-6989 or visit www.cnl.ca

You may also contact your local Algonquin Negotiation Representative or the Algonquins of Ontario Consultation Office Toll Free at 1-855-735-3759 or 613-735-3759 or by email at algonquins@tanakiwin.com.



Canadian Nuclear
Laboratories

Laboratoires Nucléaires
Canadiens

Canadian Nuclear Laboratories (CNL) is proposing to build a Near Surface Disposal Facility (NSDF). The NSDF Project is subject to federal assessment under the Canadian Environmental Assessment Act.

Near Surface Disposal Facility

a safe solution

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1 Why?



The Near Surface Disposal Facility enables the transformation of Chalk River Laboratories into a world class centre for science and technology by creating a safe and permanent disposal for more than 65 years of historical operations and the enduring mission of innovative research.

2 What?

The Near Surface Disposal Facility would be an engineered containment mound to safely dispose of low-level and other suitable waste in 10 separate cells which are covered as each disposal cell is filled.

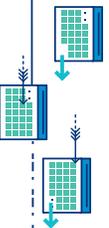
ENGINEERED CONTAINMENT MOUND



WASTE WATER TREATMENT PLANT

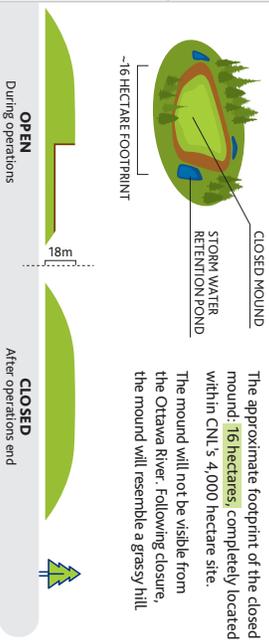
- 10 disposal cells
- Total capacity: 1 million cubic metres
- Precipitation that contacts the waste during operations is continuously removed and treated via the waste water treatment plant.

3 Timeline



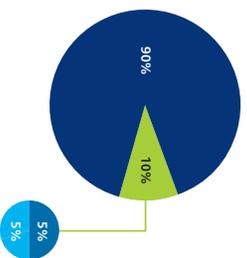
- 2017 ← March 17 – May 17: public comment period on the draft Environmental Impact Statement
- ← 2018 construction begins
- 2020 facility operation begins
- ← 2070 facility operation ends
- 2100 monitoring and surveillance period begins
- ← 2200 300-year institutional control period begins
- 2300 ...

4 What will the Near Surface Disposal Facility look like?



The approximate footprint of the closed mound: 16 hectares, completely located within CNL's 4,000 hectare site. The mound will not be visible from the Ottawa River. Following closure, the mound will resemble a grassy hill.

5 What will go in it?



- 90%* waste from Chalk River Laboratories - past, present and future
- 5%* waste from decommissioning at Whiteshell Laboratories in Manitoba and other federal nuclear liabilities
- 5% from other Canadian sources, such as universities and hospitals

* Responsibility of the Government of Canada

6 Waste Acceptance Criteria

The Near Surface Disposal Facility has strict criteria that set limits on physical, chemical and radiological characteristics of the waste. Waste that does not meet the criteria will not be accepted.



7 A safe solution

- ✓ Proven technology
- Built to protect people and the environment even in the case of a disruptive event, like an earthquake
- Canada's nuclear regulator and other federal agencies set regulations and provide oversight
- Designed with Canadian and international expertise, operated by our staff who live and work in the Ottawa Valley

8 An important conversation

- Social media
- Public Information Sessions
- Site tours
- Community events
- Newsletters
- Website
- What? • Where? • Why? • When?

CNL engages with local communities and indigenous groups to provide valuable input into the project.

9 How can I learn more?

- @CanadianNuclearLaboratories
- communications@cnl.ca
- 1-800-364-6989
- @CNL_LINC
- www.cnl.ca/NSDF

10 How do I get involved?

- Participate in the Environmental Assessment process by sharing your thoughts on the Environmental Impact Statement
- Join us at one of our Public Information Sessions in April and May
- www.cnl.ca
- www.cnl.ca/nsdf-eis

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Nuclear Power Demonstration Closure Project

A FIRST IN CANADA

The Nuclear Power Demonstration reactor, or NPD, played an important part in the history of nuclear energy in Canada as it was the first nuclear power reactor to contribute to the electrical grid.

25 YEARS OF SERVICE

In 1988, following permanent shutdown of the reactor, removal of the fuel, heavy water and power generating equipment from the site, Ontario Hydro transferred the responsibility of monitoring and licencing of NPD to Atomic Energy of Canada Limited (AECL).

Now, Canadian Nuclear Laboratories (CNL) has a commitment to the Government of Canada to permanently decommission the remaining structures.

PROJECT GOAL

To safely decommission the NPD site by 2020, thereby reducing long term nuclear liabilities.

DECOMMISSIONING SOLUTION

CNL's preferred technique for decommissioning NPD is in-situ decommissioning, which will provide an opportunity to collapse the footprint of the site.

Once the decommissioning project is complete, approximately one per cent of the land will remain under institutional control for monitoring.



WHY IN-SITU DECOMMISSIONING?

In-situ decommissioning has been selected as the decommissioning technique as it provides the following advantages:

- Reduced risk for radiological and industrial hazards exposure
- Reduced transport/waste handling risks to the public and environment
- Reduction of the nuclear liability and eliminating interim waste storage
- Eliminates the risk associated with multiple handling of waste packages
- Allows for early release of non-impacted NPD property

PROTECTING SPECIES AT RISK

CNL brings extensive environmental protection experience to the NPD Closure Project. One unique environmental protection aspect of this project is that a large population of a protected migratory bird species, the Chimney Swift, has an annual roost in the ventilation stack at NPD. Up to 2,000 birds have been viewed in a single summer night.

To protect the Chimney Swifts, the NPD Closure Project consulted a number of experts. A decision was made to keep the existing red and white stack, therefore maintaining the habitat for this species at risk.

