

## The purpose of the project:

The Near Surface Disposal Facility (NSDF) is a key facility required to enable Canadian Nuclear Laboratories (CNL) to conduct environmental remediation of contaminated soils and materials that are already present at the Chalk River Laboratories (CRL) site to protect the environment, including the Ottawa River. The NSDF represents the permanent solution to reduce environmental risk and isolate low-level radioactive waste, in accordance with international guidance and regulatory requirements. Ninety percent of this waste intended for disposal is already on site at CRL, five per cent will come from hospitals and universities, and five per cent is from other AECL sites. Only low-level waste materials will be allowed for disposal in the NSDF.

## The NSDF is:

**Safe and secure:** designed to withstand extreme weather and events such as earthquakes, tornadoes, forest fires, sabotage and major storms.

**Proven:** the engineered containment mound is internationally recognized as best practice for low-level radioactive waste disposal and the barrier system for the NSDF has undergone rigorous materials testing at Queen's University in Kingston, Ontario.

**Permanent:** providing a long-term solution to Canada's growing problem of where to store its low-level waste to ensure we take care of people and the environment now, and not leave it for future generations.

## Why the NSDF?

**For the environment.** Cleaning up our site and placing our waste in a modern, engineered facility – using the best-available technology – is key to caring for our natural surroundings, including the Ottawa River.

- Constructing and operating the NSDF will significantly improve the existing conditions at Chalk River Laboratories by enabling the cleanup of contaminated soils and materials that are already present on the site.
- The NSDF is especially designed to protect the Ottawa River. Drinking water in any location downriver is not at risk. The site is on a bedrock ridge that naturally forces water away from the River. The NSDF will also feature an advanced waste water treatment system.
- The NSDF has been designed to withstand extreme weather and events such as earthquakes, tornadoes, forest fires, sabotage, and major storms. The base of the facility is located approximately 50 metres above the Ottawa River, much higher than any flood waters that might occur.
- CNL has an established environmental monitoring program, which has been in place for over 60 years. This environmental monitoring program will be expanded to include specific monitoring related to the NSDF project. CNL shares the results of its environmental monitoring program publicly on its website.

**For ground-breaking science and technology.** The NSDF enables CNL to revitalize the Chalk River Laboratories – where our researchers advance clean energy technology and contribute to medical breakthroughs.

- The NSDF is the key enabling facility to support environmental remediation at Chalk River Laboratories, Canada's largest S&T complex. The site is a one-of-a-kind place. It is a source of unique nuclear science in Canada, producing research in health science that brings hope to people who suffer from cancer and other diseases, and making advances in clean, non-carbon energy to combat climate change for today and for tomorrow.
- To remain on the leading edge of tomorrow's ground-breaking science, CNL is revitalizing the Chalk River Laboratories campus to enable Canada's history of excellence in life-saving research and nuclear technology to continue long into the future. The NSDF is required for the disposal of building debris and other waste material resulting from the site revitalization.

**For our community.** The NSDF will positively impact economic development in our local communities by expanding operations and employment at Chalk River Laboratories.

- The facility CNL is proposing has been informed by six years of engagement and public feedback, and CNL is committed to continuing the dialogue on responsible waste solutions.
- The construction of the NSDF will benefit the community. The construction phase will require an average of 225 full-time skilled workers, with a peak workforce of approximately 300 personnel.
- CNL is working very closely with Indigenous peoples to ensure Indigenous rights and interests are represented and valued species are appropriately protected. CNL has and will continue to engage with 16 identified Indigenous communities, including the Algonquins of Pikwakanagan First Nation, Algonquins of Ontario and Métis Nation of Ontario.

**For the future.** Everything we do today leaves a footprint for tomorrow. Building the NSDF takes care of our environment now, instead of leaving the problem for future generations.

- CNL is conducting the largest and most complex nuclear remediation project in Canada across four provinces and territories, addressing Canada's legacy waste liabilities, to restore and protect the environment for future generations. The NSDF is a part of this important mission.
- The NSDF site will not be abandoned in the years following closure. It will remain under surveillance for hundreds of years and monitoring will ensure the facilities are performing as designed.
- CNL has demonstrated that the NSDF will be safe by examining the various ways future generations may interact with the disposal facility after the barriers start to degrade. Once the facility is closed, the dose to someone living downriver in Ottawa or Gatineau is one million times lower than the regulated public dose limit.

**Because it's the right thing to do.**

- The staff at CNL value safety, environmental protection, quality, and accountability. By properly disposing of the waste in a highly engineered facility built to stand the test of time, CNL is taking accountability for the waste now, instead of leaving it for future generations.
- CNL has chosen the NSDF because it is the appropriate solution that will be protective of people and the environment. This represents the guiding principle in CNL's decision to use the NSDF design, above all other factors.