The Government of Canada is committed to cleaning up former research and operating nuclear sites around Canada. On this direction, CNL is advancing the decommissioning of the Whiteshell Laboratories (WL) site with the protection of the workers, the environment and the public as top priorities.

Though decommissioning of WL has been underway for more than a decade, a renewed strategic plan has been developed which will see decommissioning of the entire site complete by 2024.

This accelerated timeline for the project is made possible through the introduction of proven approaches to bring about efficiencies and through innovative approaches to the work ahead.

This is the first step in the comprehensive process that includes public consultations and environmental assessment. The project has been, and will continue to be, overseen and regulated by Canada’s independent nuclear regulator – the Canadian Nuclear Safety Commission.

Leading this work is an international team with significant decommissioning expertise to conduct this project safely and efficiently.

END STATE
The proposed end state, leaves approximately 4,375 hectares of land unaffected, and only a small portion (less than one half of one per cent) of the former laboratories site, would be maintained under institutional control, meaning it cannot be used for other purposes.

WR-1 REACTOR
The reactor is proposed to be entombed in concrete, five stories underground. On the surface it will look like a small concrete parking lot, fenced off to protect the public. The concrete will ensure that contaminants are locked in place, underground, completely sealed off from any potential access.

RESEARCH ACTIVITIES
WL carried out nuclear research and development activities for higher temperature versions of the CANDU® reactor. Other programs carried out at WL included research into reactor safety, nuclear fuel development, chemistry and materials, radiation biophysics, small reactor research and the SLOWPOKE Demonstration Reactor Project.

WINNIPEG RIVER
River sediments have been surveyed for radioactivity at hundreds of locations. The assessment concluded that “using the most conservative dose estimation methods, doses to humans and non-human biota are below accepted guidelines.” The analysis methodology and results were peer reviewed and are available to the public.
NEW FACILITIES
A Shielded Modular Above-ground Storage (SMAGS) building was built to safely process and store low-level radioactive waste, and a Soil Storage Compound was built within the boundaries of the existing waste management area in order to store contaminated soil.

HAZARDOUS WASTE
Waste classified as hazardous (e.g., PCB, lead, asphalt roofing material, hydrocarbons) is sent off site to waste receivers licensed to receive and handle it.

WASTE DISPOSAL
The clean asbestos waste is managed on site in the WL on site landfill. Clean recyclable waste (e.g., scrap metal, cardboard) is sent to off-site facilities.

WASTE MANAGEMENT AREAS
All radioactive waste at the WL site is safely and securely stored in the site’s Waste Management Area. WL is implementing a characterization plan to determine the scope of the clean-up at the Waste Management Area and the final disposition of the material to be remediated.