



Environmental Assessment Report: **Canadian Nuclear Laboratories** **Chalk River Laboratories Nuclear Research and Test Establishment Licence**

September 2017



EXECUTIVE SUMMARY

The Canadian Nuclear Safety Commission (CNSC) conducts environmental assessments (EAs) under the *Nuclear Safety and Control Act* (NSCA) for all projects, in accordance with its mandate, to ensure the protection of the environment and the health of persons. The safety component of the CNSC's mandate is covered in the safety case assessment carried out for all projects.

This EA Report, written by CNSC staff for the Commission and the public, describes the findings of the EA under the NSCA completed for the licence application by Canadian Nuclear Laboratories Ltd. (CNL) to renew the Chalk River Laboratories (CRL) Nuclear Research and Test Establishment Operating Licence, NRTEOL-01.00/2018. This licence covers the operation of the CRL site, which houses various licensed nuclear facilities, including research reactors, a molybdenum processing facility, a nuclear fabrication laboratory, shielded facilities, a waste management area, a waste treatment centre, a recycled fuel fabrication laboratory and tritium-handling facilities. This EA report (and licence application) does not consider CNL's proposed Near Surface Disposal Facility, as the proposed NSDF project is undergoing a separate *Canadian Environmental Assessment Act* (CEAA) 2012 process.

This EA Report includes CNSC staff's assessment of the licence application and the documents submitted in support of the application, the site-wide environmental risk assessment (ERA), annual safety (environmental monitoring) reports and compliance verification activities (e.g., inspections, audits, reviews) conducted at the CRL site, as well as the findings of the CNSC's Independent Environmental Monitoring Program (IEMP).

The EA Report focuses on environmental topics that are of current public and regulatory interest such as, releases to air and water, health of the surrounding populations, and the protection of groundwater, surface water, aquatic and terrestrial environments.

CNSC staff's conclusions are based on, but are not limited to, the following, that:

- CNL's environmental protection programs meet CNSC regulatory requirements
- the findings and methodology of CNL's site-wide ERA are in compliance with Canadian Standards Association (CSA Group) standard N288.6-12, *Environmental risk assessments at Class I nuclear facilities and uranium mines and mills*
- the results of the CNSC's 2012, 2013 and 2015 IEMP confirm that the public and the environment in the vicinity of the CRL site are protected from the releases from the site

Based on the EA under the NSCA conducted for this licence application, CNSC staff conclude that CNL has made, and will continue to make, adequate provision for the protection of the environment and the health of persons, up until and including the decommissioning and abandonment of the site.