

PORT GRANBY PROJECT 2018 ANNUAL COMPLIANCE REPORT EXECUTIVE SUMMARY

This annual compliance monitoring report for the 2018 calendar year has been prepared as per licence condition 3.1 of the Port Granby Long Term Low Level Radioactive Waste Management Project Licence WNSL-W1-2311.02/2021 and of the *Port Granby Long-Term Low-Level Radioactive Waste Management Project Licence Conditions Handbook* as a summary report of annual compliance monitoring and operational performance.

The Port Granby Long-Term Low-Level Radioactive Waste Management Project is part of the larger Port Hope Area Initiative (PHAI). The PHAI is a community-based project designed to develop and implement a safe, local, long-term management solution for historic low-level radioactive waste (LLRW) within the Port Hope and Clarington municipalities. The PHAI is defined by *An Agreement for the Cleanup and Long-Term Safe Management of Low-Level Radioactive Waste Situated in The Town of Port Hope, The Township of Hope and the Municipality of Clarington* which took effect on 2001 March 29, between the Government of Canada and the municipalities of Port Hope and Clarington for the management of the LLRW within each of the communities. Canadian Nuclear Laboratories (CNL) is responsible for the direction and execution of the PHAI in compliance with the Legal Agreement, licences and Environmental Assessment decisions. CNL has overall responsibility for managing the PHAI on behalf of Atomic Energy of Canada Limited, a federal Crown corporation.

This report provides site-specific information to supplement information in the *Annual Compliance Monitoring Report for Canadian Nuclear Laboratories* which provides corporate updates to 14 Safety and Control Areas as they are applied across all CNL. Performance highlights for 2018 activities are outlined below.

Management system

- CNL completed all required reporting as outlined in Licence Condition 3.1, *Licence Conditions Handbook*.
- CNL developed a long range plan to conduct 4 Self-Assessments on the implementation of the PHAI Environmental Management and Protection Plan, Environmental Monitoring Plan, Quality Assurance Plan, PHAI Radiation Protection Plan.

Human performance management

- A wide range of mandatory and other job-specific training activities were carried out in 2018 to ensure all personnel have mandated training as appropriate for their duties.
- Individual Learning Plans were created for each CNL employee and were tracked and monitored through regular job performance meetings.

Facility and Equipment and Physical Design

- CNL continued to manage the PG LTLRWM project site during remediation activities in accordance with approved procedures, as outlined in the Licence Conditions Handbook.
- Internal roadways were realigned to support excavation activities.
- Remediation verification of Phases 1 and 5 were completed. Phase 5 was backfilled and hydroseeded.
- In 2018, excavation of LLRW PGWMF and transport of LLRW to LTWMF continued in 2018. Approximately 484, 445 tonnes of excavated waste was transported from the PG WMF to Cell 1 and Cell 2 of the PG LTWMF.
- Granular materials continued to be hauled to and stockpiled at north end of site for future activities.
- Dredging of the equalization (EQ) pond was completed in 2018.
- Installed and operated the Veolia portable water treatment system to increase water treatment capacity. The system was shut down for cold weather and winter storage in 2018 November.
- Completed construction of five temporary water storage tanks east of the PG LTWMF to improve flexibility and contingency for management of contaminated water and storm water.
- In 2018 September, the PG WWTP began operating on a 24/7 schedule to manage influent water levels and maximize the throughput and production of residuals.
- Representatives for the Municipality of Clarington and CNL continued working towards an agreement between the Municipality of Clarington and Canada for Lakeshore Road, the Lakeshore Road Detour and Nichols Road. Design refinements to Lakeshore Road to incorporate the closing of Nichols Road, the new Lakeshore Road/Elliott Road intersection and the proposed Lakeshore Road allowance required to determine the end state.

Safety analysis

- As per the *Licence Conditions Handbook*, the Safety Analysis Program is not applicable to the Port Granby Project.

Fitness for service

- As per the *Licence Conditions Handbook*, the Fitness for Service Program is not applicable to the Port Granby Project.

Radiation protection

- Radiation Protection doses for workers remain As Low As Reasonably Achievable (ALARA) and doses for public remain low.

- Radiation exposures for workers and public were below all regulatory dose limits in 2018.

Conventional health and safety

- All licensed activities continued to be carried out safely and securely.
- There were no lost time injuries in 2018.
- In 2018, the HWP MO SSHC conducted four inspections at the PG WWTP that resulted in minor findings. All remedial actions identified were completed in 2018.

Environmental protection

- Environmental protection and mitigation continues to be effective; changes from the baseline are minimal and generally within the EA predictions. EA follow-up and operational monitoring continued in 2018 with no areas of concern.
- Erosion control and dust suppression measures at the PG WMF and PG LTWMF sites were implemented through 2018.
- There were no exceedances of Health Canada reference values for radionuclides in 2018.
- Real-time dust monitoring results from the Independent Dust Monitoring Program for the PG LTWMF construction continue to be available at www.phai.ca. Weekly reports include daily real time dust measurements and a site map illustrating the locations of the independent real time dust monitors.
- Groundwater levels were measured quarterly in 2018 and results indicate levels are similar to previous years. A slight decrease in average groundwater levels in 2018 was observed in most wells relative to the 2017 data, which coincides with similar amounts of rainfall observed in 2018 as compared to amounts of rainfall observed in 2017.

Emergency management and fire protection

- In 2018, there were two emergency events that directly or indirectly affected the PGP. The first was the unplanned release of untreated water to the environment as a result of a leak that developed in the side wall of one of the WWTP bioreactors. The second was a false fire alarm that resulted in a response from Clarington Fire and Rescue.
- In 2018 December, an emergency tabletop drill was completed to test the Environmental Emergency Plan for chemical releases at the PG WWTP. The drill was effective with the Environmental Emergency Plan update.

Waste management

- The PG WWTP continued to operate in conformance with the *Licence Conditions Handbook*.
- CNL continued operations at the PG LTWMF in accordance with the parameters of the CNSC licence.

Security

- There was one security event that affected the PGP in 2018 and was reported to CNSC.

Safeguards and Non-Proliferation

- As per the *Licence Conditions Handbook*, the Safeguards and Non-Proliferation Program is not applicable to the Port Granby Project.

Other Matters of Regulatory Interest

- Public consultation and stakeholder relations activities continued to be conducted in accordance with the PHAI Public Information Program.
- CNL maintained effective relationships with the local community and First Nations through its many outreach and stakeholder relations activities, in accordance with the PHAI Public Information Program.
- CNL engaged approximately 1,374 people about the PHAI through presentations and tours of the project sites.

CNL is committed to achieving high standards of operational safety and security. The information and data presented in the report support the conclusion that safe and secure performance is being achieved at the Port Granby Long Term Low Level Radioactive Waste Management Project (PG LTLRWM) site, while enhancements are being implemented to further improve results.