



PORT GRANBY PROJECT 2021 ANNUAL COMPLIANCE MONITORING REPORT EXECUTIVE SUMMARY

This annual compliance monitoring report for the 2021 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* (WNSL-W1-2311.02/2021) and of the *Port Granby Long-Term Low-Level Radioactive Waste Management Project Licence Conditions Handbook* (LCH) as a summary report of annual compliance monitoring and operational performance.

CNL's Historic Waste Program Management Office and the Port Hope Area Initiative projects are situated on the traditional and treaty lands of the Williams Treaties First Nations, specifically the treaty signed with the Mississauga First Nations of Alderville, Curve Lake, Hiawatha and Scugog Island.

The Mississauga First Nations are also signatories to various 18th and 19th century treaties that covered lands in different parts of south-central Ontario. In 1923, the Mississauga First Nations and the Chippewa First Nations consisting of Rama, Beausoleil and Georgina Island signed the Williams Treaties and together, over 90 years later in June 2018, joined to ensure that their rights to and the relationship with these lands is respected through a renewed agreement with Canada and the Province of Ontario.

The area in which we are situated is also home to Indigenous Peoples from across the region and Canada. CNL is grateful to have the opportunity to work on these traditionally and culturally significant lands and waterways.

The Port Granby Long-Term Low-Level Radioactive Waste Management Project (PGP) 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* (Legal Agreement), 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 Low-Level Radioactive Waste (LLRW) within each of the communities. 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 (AECL), a federal Crown corporation.

This report provides site-specific information to supplement information in the corporate *Annual Compliance Monitoring Report for Canadian Nuclear Laboratories* (ACMR for CNL), which provides corporate updates to 14 Safety and Control Areas as they are applied across all CNL. Performance highlights for 2021 activities are outlined below.



PHAI Communications and Engagement

- Indigenous community relations, public consultation, and public stakeholder and activities continued to be conducted in accordance with the Port Hope Area Initiative Public Information Program.

Management System

- CNL completed all required reporting as outlined in Licence Condition 3.1, PGP LCH.
- One external audit was conducted by SAI Global for the maintenance of CNL's ISO 9001:2015 certification specific to the PGP in 2021.
- The tri-annual HWP MO internal audit was completed this year in two parts due to resource restrictions with COVID-19.
- Nine self-assessments were initiated in 2021, and four from 2020 were completed.

Human Performance Management

- A range of mandatory and other job-specific training activities were carried out in 2021 to ensure that all PGP employees and contractors acquired mandated training (including refresher training) as appropriate for their duties to ensure the safe operation of the PGP facility and to conduct work under the PGP Licence.
- The Curriculum Review Committee continued to meet throughout 2021 to support the PHAI's Systematic Approach to Training program.

Facility and Equipment

- CNL continued to manage the PGP site during remediation activities in accordance with approved procedures, as outlined in the PGP LCH.
- Construction and installation of the Port Granby Long-term Waste Management Facility (PG LTWMF) Cap layers was completed in August 2021.
- Construction and commissioning activities continued for the East Gorge Groundwater Collection (EGGC) system.
- Commissioning and troubleshooting continued for the PG LTWMF Leachate Pump Stations 05 and 06.
- Decontamination of equipment for offsite release is ongoing.
- Lakeshore Road reinstatement was completed in 2021.
- Consolidation activities of generated waste developed through decommissioning of the Port Granby Waste Water Treatment Plant (PG WWTP) outdoor activities is ongoing.

Safety Analysis

- As per the PGP LCH, the Safety Analysis Program is not applicable to the PGP.

Physical Design

- There were no major design or equipment changes at the PGP LTWMF in 2021.



Fitness for service

- As per the PGP LCH [2], the Fitness for Service Program is not applicable to the PGP.

Radiation Protection

- As Low As Reasonably Achievable (ALARA) initiatives and activities continued to be at the forefront of the PGP Radiation Protection Program (RPP).
- Radiation Protection doses for workers remained ALARA and doses for public remain low. There were no exceedances of regulatory limits and action levels in the dose monitoring program.
- Refresher training was provided to staff on the efficacy of the radiation work planning process which included the Radiation Work Permitting process as applied to under the Integrated Work Control (IWC) program.
- There were no exceedances of regulatory limits and action levels in the dose monitoring program.

Conventional Health and Safety

- All licensed activities continued to be carried out safely and securely.
- The Historic Waste Program Management Office's Site Safety and Health Committee increased its focus on the importance of the COVID-19 Pandemic and the shift to remote work for majority significant number of the workers at PHAI project sites.
- There was a project safety pause due to a series of heavy equipment near misses and rising trend of personal injury events. The pause involved a project-wide assessment and subsequent verification of equipment related hazards and controls.
- There were 43 site health and safety inspections completed in 2021.

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 2021.

Emergency Management and Fire Protection

- All required annual fire response drills, were completed as per program and regulatory requirements.
- Site emergency plans were updated in conjunction with changed personnel and processes impacted by COVID-19 Pandemic restrictions.
- A PHAI 5-year Exercise and Drill Plan was developed to support improved planning and monitoring of annual drill expectations.
- Comprehensive retraining for CNL Emergency Stewards and Officer in Charge Personnel was completed in conjunction with updated emergency plans.
- Staff training on emergency procedures was completed in parallel to improved emergency notification infrastructure upgrades.



- Fire screening assessments were completed in support of CNL's ECC process for capital and maintenance/ repair projects.

Waste management

- The PG WWTP continued to operate in conformance with the PGP Licence Conditions Handbook.
- In 2021, there were:
 - 65 tonnes of process residual waste sent to CRL for future disposal.
 - 1,044 tonnes of evaporator concentrate was sent off-site for disposal at a contract waste disposal site.
 - 22 tonnes of process residual waste was sent to the PH LTWMF for long term management; and,
 - 4,446 tonnes of evaporator concentrate was sent for treatment at the PH WWTP.

Security

- Contractors conducting work at the PGP site continued to be in compliance with CNL's corporate security policies and programs including those requirements mandated in the Port Hope Area Initiative Security Plan, as confirmed through CNL's oversight program.
- No reportable security events occurred at the PGP in 2021.

Safeguards and Non-Proliferation

- As per the PG LCH, the Safeguards and Non-Proliferation Program is not applicable to the PGP.

Packaging and Transport

- The PHAI Transportation of Dangerous Goods Program continued to operate the safe off-site transport and shipment of dangerous goods by conforming to all applicable laws and regulations, including company policies and procedures.
- Shipments of dangerous goods continued to be received at the PGP site from offsite vendors (consumable chemicals, diesel fuel, and propane).
- There were no reportable events related to the Transportation of Dangerous Goods Program in 2021.

CNL is committed to achieving high standards of operational safety and security. The information and data presented in this report support the conclusion that safe and secure performance was achieved at the PGP site in 2021, while enhancements were implemented to further improve results.

For a detailed description of CNL's robust mitigation initiatives and controls to protect its employees, contractors, visitors and Site operations from the COVID pandemic, see the Executive Summary in the ACMR for CNL.