

PORT HOPE PROJECT 2018 ANNUAL COMPLIANCE REPORT EXECUTIVE SUMMARY

This annual compliance monitoring report for the 2018 calendar year has been prepared as per licence condition 2.3 of the Port Hope Long-Term Low-Level Radioactive Waste Management Project Licence WNSL-W1-2310.01/2022 and Section 3.2.3 (e.) of the Port Hope Licence Conditions Handbook as a summary report of annual compliance monitoring and operational performance.

The Port Hope 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 the Licence Conditions Handbook under section 3.2.3.
- CNL developed a long range plan to conduct 4 Self-Assessments and 1 Focused Self-Assessment on the implementation of the *PHAI Environmental Management and Protection Plan, Environmental Monitoring Plan, Quality Assurance Plan, PHAI Radiation Protection Plan* and HWP Communications Strategy during the 2018/2019 fiscal year.

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

- *PH LTWMF*: The substantial completion of the collection pond structure modifications occurred in 2018, resulting in an increased total storage capacity of 52,000 m³. In 2018, the installation of weigh scales to enable receipt of on-site waste was completed; the Water Treatment Collection Pond expansion was completed resulting in an increased capacity of 47,000 m³ to elevation 121.7 mASL; onsite waste was removed from the Cell 2a footprint and RVSOP was completed; and cell 3 construction was completed in 2018 October and began to receive waste in 2018 November.
- *Small Scale Sites*: the *Dust Management and Requirements Plan for Small Scale Sites Remediation* was implemented at the Peter Street Mound and on the Package 1 and 2 SSS remediations in 2018.
- *Historic Properties*: In 2018, 5 exterior historic LLRW remediations were completed.
- *Temporary Storage Sites (TSS)*: Remediation of the Centre Pier TSS and Pine Street North Extension TSS was completed in 2018.
- *Waterfront Area*: In 2018, a tree survey was completed on the Alexander Street ravine and included a sampling program to determine potential for radiological impact and arsenic uptake on the trees.
- *Industrial Sites*: ESA Phase 1 and initial Phase 2 ESA drilling was conducted at Centre Pier, Lions Park and the Coal Gasification Plant, in 2018. A Data Gap, Preliminary PCB investigation on the northern portion of the Chemetron Lagoon site was also conducted.
- *PH WWTP*: The PH WWTP Zone 1 and Zone 2 Active Commissioning Report was completed and submitted to the CNSC in 2018 February.

Safety analysis

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

Physical Design

- In 2018, approved action levels have been implemented at the PH WWTP and updated in the PHP Quarterly Effluent Reports.
- In an effort to improve operation of the facility, CNL utilized CRL Design Engineering to install process flow control valuing to better utilize the solids handling and waste processing equipment. All fixes and upgrades followed CNL's Engineering Change Control process.

Fitness for service

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

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 one inspection at the PH 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 well within the EA predictions. EA follow-up and operational monitoring continued in 2018 with no areas of concern.
- 2018 spring and fall sampling results for seven on-site PH LTWMF observation wells were consistent with historical data.
- Three observation wells were decommissioned in 2018 as part of the LTWMF activities, with no plans to replace.

Emergency management and fire protection

- There were no emergency events that directly or indirectly affected the PHP.
- In 2018, CNL conducted a live drill at the PH LTWMF which involved CNL, the contractor, Port Hope Fire and Rescue and Northumberland EMS.

Waste management

- The Port Hope Waste Water Treatment Plant (PH WWTP) continued to operate in conformance with the Licence Conditions Handbook. No release limits were exceeded and the effluent was found not to be toxic.
- CNL continued operations at the PH LTWMF in accordance with the parameters of the CNSC licence.
- Four Waste Management Plans were created in accordance with the CNL's Management System Framework in 2018 (Management of Historic Artefact Recovery Program Plan; Port Hope Project – Management of Historic LLRW Plan; Cameco Decommissioning Waste Management Plan; Reconfiguration of Administration Building at 196 Toronto Road Plan).

Security

- There was one security event at the TSS PSNE that affected the PHP in 2018 and was reported to CNSC.

Safeguards and Non-Proliferation

- The PH LTWMF received 1,622 supersacs from Cameco (material balance area CNWF) in accordance with the requirements of CNL's Nuclear Materials and Safeguards program.
- The IAEA conducted inspections as part of the safeguards approach, including implementation and maintenance of IAEA safeguards monitoring equipment and technical visits.

Packaging and transport

- The PHAI Transportation of Dangerous Goods (TDG) Program continued to operate the safe off-site transport and shipment of dangerous goods by conforming to all applicable laws and regulations, as well as company policies and procedures.
- In 2018, the TDG program was enhanced through the hiring of a dedicated TDG Specialist whose role includes support and oversight to improve the program processes and performance measures and to support regulatory compliance of third party transportation partners.

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, tours and participation at local events in the community.
- In 2018, CNL held in-person meetings with 272 property owners to discuss remediation and design details of their property cleanup.

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 Hope Long-Term Low-Level Radioactive Waste Management Project (PH LTLLRWM) site, while enhancements are being implemented to further improve results.