



Port Hope Area Initiative Waste Management Project Annual Compliance Monitoring Report for 2025

4500-508760-ACMR-011749

Revision 0

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Revision History

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EXECUTIVE SUMMARY

This Annual Compliance Report for the 2025 calendar year has been prepared in accordance with Licence Condition 3.1 of the Port Hope Area Initiative (PHAI) Licence and Canadian Nuclear Safety Commission (CNSC) Regulatory Document (REGDOC)-3.1.3, *Reporting Requirements for Waste Nuclear Substance Licensees, Class II Nuclear Facilities and Users of Prescribed Equipment, Nuclear Substances and Radiation Devices*. This report is produced to demonstrate that Canadian Nuclear Laboratories (CNL) has successfully met the requirements of the *Nuclear Safety and Control Act*, associated regulations, the *Port Hope Area Initiative Waste Management Project Licence WNSL-W1-2310.00/2032* (PHAI Licence), and associated *Port Hope Area Initiative Radioactive Waste Management Project Licence Conditions Handbook (PHAI LCH)*.

Canadian Nuclear Laboratories operates on sites located on the traditional lands, waterways and ceded and unceded territories of Indigenous peoples. CNL recognizes and affirms all First Nations, Métis communities, and Inuit in this land we now know as Canada.

The CNL Historic Waste Program Management Office and the Port Hope Area Initiative projects are situated on the traditional lands of the Williams Treaties First Nations, specifically the Gunshot Treaty negotiated between the Crown and Mississauga Nation during the 1780s and represented today by the Williams Treaties First Nations.

The Mississauga 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 – Alderville, Curve Lake, Hiawatha and Mississaugas of Scugog Island – 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 and the relationship with these lands are 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. Canadian Nuclear Laboratories is grateful to have the opportunity to work on these traditionally and culturally significant lands and waterways.

This document provides CNL compliance monitoring and performance information for the PHAI and is organized by CNSC's 14 Safety and Control Areas (SCAs). This report provides site-specific information to supplement information in the Annual Compliance Monitoring Report for Canadian Nuclear Laboratories for 2025, which provides programmatic updates and reports on performance of the 14 SCAs and CNL's Public Information Program as applicable to all CNL sites.

Overall Performance Highlights

During the reporting period, CNL continued to manage the PHAI remediation activities in accordance with accepted procedures, as outlined in the *PHAI LCH*. The following is a list of overall performance highlights at PHAI for 2025:

- All licensed activities continued to be carried out safely and securely.
- No member of the public received a radiation dose that exceeded any regulatory limit.
- No worker received a radiation dose in excess of any of the respective regulatory limits or PHAI Action Level radiation dose limits for Nuclear Energy Workers (NEWs) or non-NEWs.
- One (1) release to the environment exceeded the Provincial Water Quality Objectives limit for uranium.

Engagement with Indigenous Communities and Organizations

Historically, the PHAI Public Information Program had included Indigenous communities and organizations as a target audience. In support of CNL's objective to advance reconciliation through meaningful actions and movement toward increased inclusion and participation, the PHAI Phase 2 and 3 Program for Engagement with Indigenous Communities and Organizations was implemented in tandem with the public information program and aligned with CNL company-wide Indigenous relations efforts. A total of 52 engagements with Indigenous communities and organizations took place in 2025, including meetings, site tours, and community visits.

Safety and Control Areas

The following is a summary of key 2025 compliance initiatives and improvements at the PHAI which are further described in the relevant SCA sections of this report.

Safety and Control Area 1 - Management System

Canadian Nuclear Laboratories has a well-established management system that defines the requirements to ensure that applicable work is conducted in accordance with requirements and best practices. Internal audits and self-assessments were conducted as required. ISO 9001:2015 *Quality Management Systems – Requirements* certification was maintained. The management system was effectively implemented at the PHAI during the reporting period.

Safety and Control Area 2 - Human Performance Management

Canadian Nuclear Laboratories has a well-established Training Program. It is in place to enhance human performance through the development and implementation of processes that ensure workers are sufficient in numbers in all relevant job areas and have the necessary knowledge, skills, and tools in place to safely carry out their duties. The PHAI maintained a sufficient number of qualified workers to carry out the licensed activities safely. A range of mandatory and other job-specific training activities were carried out in the reporting period to ensure that all PHAI employees and contractors acquired mandated training (including refresher training) as appropriate for their duties to ensure safe operations while conducting work under the PHAI Licence.

Safety and Control Area 3 - Operating Performance

Canadian Nuclear Laboratories has a well-established Conduct of Operations Program. Canadian Nuclear Laboratories completed all required reporting as outlined in Section 3.1 of the *PHAI LCH*. Twelve (12) events were reported to the CNSC in the reporting period, as outlined in the applicable SCAs.

Safety and Control Area 4 - Safety Analysis

As per the *PHAI LCH*, the safety analysis SCA is not applicable to the PHAI.

Safety and Control Area 5 - Physical Design

Canadian Nuclear Laboratories has a well-established Physical Design Program. Changes made to the physical facility, equipment, processes, procedures, or practices that could adversely affect the design basis are identified and assessed by key stakeholders through the Engineering Change Control Program. During the reporting period, three (3) Engineering Changes, seventeen (17) Reduced Risk Engineering Changes, and eleven (11) Item Equivalency Evaluation Requests were initiated, with no activities assessed as a Category 1 or 2 change. Additionally, a minor revision to the Port Hope Project Remediation Sites Design Basis document was completed in response to CNSC comments.

Safety and Control Area 6 - Fitness for Service

Canadian Nuclear Laboratories has a well-established Fitness for Service Program. All equipment in the Port Hope and Port Granby Waste Water Treatment Plants was maintained in a ready-to-operate state except for the residual solids processing equipment at Port Granby, the dismantling of which began in 2025 and will continue through 2026.

Safety and Control Area 7 - Radiation Protection

Canadian Nuclear Laboratories maintains a well-established Radiation Protection Program, with As Low As Reasonably Achievable (ALARA) principles continuing to guide all PHAI activities. In 2025, enhancements implemented through Revision 8 of the PHAI Radiation Protection Plan strengthened risk-informed dose management, work planning, and oversight. As part of these changes, historical dose data and work activities were reviewed to confirm continued eligibility for NEW designation, and workers who no longer met the regulatory criteria were appropriately deregistered. This ensured that radiological controls and monitoring requirements remained commensurate with actual exposure potential. Radiation doses to workers remained ALARA and estimated doses to members of the public remained low. There were no exceedances of regulatory dose limits or Action Levels, and no reportable radiation protection events during the reporting period.

Safety and Control Area 8 - Conventional Health and Safety

Canadian Nuclear Laboratories has a well-established Conventional Health and Safety Program to manage non-radiological workplace safety hazards and to protect personnel and equipment. All licensed activities continued to be carried out safely and securely. One (1) reportable occupational health and safety event occurred during the reporting period when a contractor worker sustained a leg fracture resulting in forty-one (41) days of lost time. The incident did not have any long-lasting adverse effects on the safety and security of persons or the environment.

Safety and Control Area 9 - Environmental Protection

Canadian Nuclear Laboratories has a well-established Environmental Protection Program that monitors radiological and hazardous substances to minimize risk to employees, the public, and the environment. The effluent and environmental monitoring results are contained in and submitted to the CNSC in a separate report. There was one (1) reportable environmental event to the CNSC in the reporting period. Surface water was released to the environment that exceeded the Provincial Water Quality Objectives limit for uranium.

Safety and Control Area 10 - Emergency Management and Fire Protection

Canadian Nuclear Laboratories has well-established Emergency Management and Fire Protection programs in place to reduce the risk of fires; assist PHAI staff and community first responders in responding to events; and assist in the protection of employees, the local community, and the environment. All required annual fire response drills were completed per program and regulatory requirements. There were seven (7) reportable emergency events in the reporting period. The reported events did not have any long-lasting adverse effect on the health, safety, and security of persons or the environment.

Safety and Control Area 11 - Waste Management

Canadian Nuclear Laboratories has a well-established Waste Management Program. On-site management of waste occurred safely and without incident. Waste deliveries originating from various sites including Cameco, Waterfront Sites, Small-Scale Sites, Harbour and Centre Pier, and the Highland Drive landfill, and other waste sources such as on-site waste transfers, were made to the Port Hope Long-Term Waste Management Facility. There were no reportable waste management events in the reporting period. Corrective actions to address Notices of Non-Compliance (NNC) arising from a CNSC inspection resulted in program improvements.

Safety and Control Area 12 - Security

Canadian Nuclear Laboratories has a well-established Security Program that is in place to implement and support the security requirements stipulated in the relevant regulations and the *PHAI LCH*. There was one (1) reportable security event in the reporting period. The reported event did not have any adverse effect on the health, safety, and security of persons or the environment.

Safety and Control Area 13 - Safeguards and Non-Proliferation

Canadian Nuclear Laboratories has a well-established Nuclear Materials and Safeguards Management Program. The program undertakes all required measures to ensure implementation of safeguards in accordance with International Atomic Energy Agency commitments. Inventory changes were documented and reported to the CNSC as required. There was one (1) reportable safeguards event related to monitoring infrastructure in the reporting period. The reported event did not have any adverse effect on the health, safety, and security of persons or the environment.

Safety and Control Area 14 - Packaging and Transport

Canadian Nuclear Laboratories has a well-established Packaging and Transport Program. The 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 from off-site vendors at the PHAI site (e.g., consumable chemicals, diesel fuel, and propane). There were two (2) reportable packaging and transport events in the reporting period. The reported events did not have any adverse long-term effect on the health, safety, and security of persons or the environment.

Public Information Program

Canadian Nuclear Laboratories has implemented a public information program since inception of the project. The program includes a public disclosure protocol regarding events and developments involving PHAI facilities or activities. Fourteen (14) public disclosures related to the PHAI were made in the reporting period. Stakeholder and public engagement continued in 2025 in accordance with the public information program, with a total of 11 presentations, 16 site tours of the PHAI sites and participation in 31 events.

Conclusion

In the 2025 calendar year, the PHAI continued to carry out our program of work with an unwavering commitment to safe operations. During this period, the PHAI successfully protected the health and safety of persons, the environment, national security and international obligations, while implementing improvements to strengthen our performance into the future. This enabled the PHAI to perform its mission on behalf of Canadians - restoring and protecting the environment.

ACKNOWLEDGEMENTS

The "Author" of this document would like to thank the many authors and reviewers from Functional Support Areas (FSAs) and Facilities for their production of the individual sections of the report.

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Land Acknowledgement

The Canadian Nuclear Laboratories Historic Waste Program Management Office and the Port Hope Area Initiative projects are situated on the traditional lands of the Williams Treaties First Nations, specifically the Gunshot Treaty negotiated between the Crown and Mississauga Nation during the 1780s and represented today by the Williams Treaties First Nations.

The Mississauga 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 – Alderville, Curve Lake, Hiawatha and Mississaugas of Scugog Island – 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 and the relationship with these lands are 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. Canadian Nuclear Laboratories is grateful to have the opportunity to work on these traditionally and culturally significant lands and waterways.

Indigenous History of the Port Hope Area

The following is an excerpt from a full historical context of the Indigenous History of Port Hope prepared by Gitiga Migizi, a respected Elder and Knowledge Keeper of the Michi Saagiig Nation, and generously provided to CNL.

‘The traditional homelands of the Michi Saagiig (Mississauga Anishinaabeg) encompass a vast area of what is now known as southern Ontario. The Michi Saagiig are known as “the people of the big river mouths” and were also known as the “Salmon People” who occupied and fished the north shore of Lake Ontario where the various tributaries emptied into the lake. Their territories extended north into and beyond the Kawarthas as winter hunting grounds on which they would break off into smaller social groups for the season, hunting and trapping on these lands, then returning to the lakeshore in spring for the summer months.

The Michi Saagiig were a highly mobile people, travelling vast distances to procure subsistence for their people. They were also known as the “Peacekeepers” among Indigenous nations. The Michi Saagiig homelands were located directly between two very powerful Confederacies: The Three Fires Confederacy to the north and the Haudenosaunee Confederacy to the south. The Michi Saagiig were the negotiators, the messengers, the diplomats, and they successfully mediated peace throughout this area of Ontario for countless generations...’

Read the full text on the PHAI website - [Indigenous History of the Port Hope Area - PHAI](#).

Introduction

Canadian Nuclear Laboratories (CNL) is Canada's premier nuclear science and technology organization and a world leader in developing nuclear technology for peaceful and innovative applications. Using unique expertise, CNL is restoring and protecting the environment and advancing clean energy technology, and its medical breakthroughs continue to improve the health of people around the world.

Atomic Energy of Canada Limited (AECL), a federal Crown corporation, has contracted CNL to manage and operate its sites and facilities across the country. Canadian Nuclear Laboratories is also contracted to carry out AECL's mandate to enable nuclear science and technology and to protect the environment by fulfilling the Government of Canada's radioactive waste and decommissioning responsibilities. Through its Historic Waste Program Management Office (HWP MO), CNL is implementing the Port Hope Area Initiative (PHAI) on behalf of AECL.

The PHAI represents the federal government's response to the community-requested solution for the cleanup and local, long-term, safe management of historic low-level radioactive waste (LLRW) in the municipalities of Port Hope and Clarington, Ontario. The waste is the result of the refining practices of the former Crown corporation, Eldorado Nuclear Ltd., and its private sector predecessors. The original Eldorado refining operation and plant were established in the 1930s without consultation with Indigenous Peoples of the area.

An Agreement for the Cleanup and the 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) [1], finalized in 2001 March between the Government of Canada and the two municipalities, launched the PHAI by defining the framework and setting out the responsibilities for the Port Hope Project (PHP) and the Port Granby Project (PGP). The Legal Agreement [1] is periodically amended as needed to support changing circumstances.

Licence Information and Reporting Period

Name: Canadian Nuclear Laboratories Ltd.

Port Hope Area Initiative Waste Management Project.

Locations: Municipality of Port Hope (MPH), Municipality of Clarington, and Regional Municipality of Durham.

This Annual Compliance Report is produced to comply with the following:

- Licence Condition 3.1 of the *Port Hope Area Initiative Waste Management Project Waste Nuclear Substance Licence* (WNSL-W1-2310.00/2032), hereafter referred to as the *PHAI Licence* [2].
- The compliance verification criteria listed in the *PHAI Waste Management Project Licence Conditions Handbook* [3], hereafter referred to as the *PHAI LCH* [3].

- Section 4 Annual Compliance Report of Canadian Nuclear Safety Commission (CNSC) Regulatory Document (REGDOC)-3.1.3, *Reporting Requirements for Waste Nuclear Substance Licensees, Class II Nuclear Facilities and Users of Prescribed Equipment, Nuclear Substances and Radiation Devices* [4].

Information included in this report is for the period of 2025 January 01 to 2025 December 31. This report provides site-specific information to supplement the information provided in the *Annual Compliance Monitoring Report for Canadian Nuclear Laboratories (ACMR for CNL)* [5], which provides corporate updates to the 14 Safety and Control Areas (SCAs) as they are applied across all CNL.

The intent of this report is to provide sufficient detail to demonstrate how PHAI programs are meeting the regulatory requirements of the *Nuclear Safety and Control Act* [6] and associated regulations and requirements as specified in the *PHAI Licence* [2] and the *PHAI LCH* [3]. A separate report is provided for the Environmental Protection SCA [7], submitted to the CNSC under separate cover.

Changes to Organizational Structure

As discussed in the *ACMR for CNL* [5], CNL operates with a Government-Owned, Contractor-Operated model where CNL is responsible for the operation of the facilities while the contractor provides management of CNL. On 2025 December 11, a new contractor, Nuclear Laboratory Partners of Canada (NLPC), formally assumed management of CNL.

Facilities Included in this Report

Facilities included in this report are described as follows:

The Port Granby Long-Term Waste Management Site

- The Port Granby Long-Term Waste Management Facility (PG LTWMF) and the Port Granby Waste Water Treatment Plant (PG WWTP) are located on the Northern Site at 4780 Lakeshore Road, in the Municipality of Clarington (Figure 1). The facility is 580 m north of Lakeshore Road, immediately northwest of the remediated former Port Granby Waste Management Facility (PG WMF). The site is bounded by Elliott Road to the west, Nichols Road on the east and the Canadian National Railway to the north.
- The Southern Site is located at 4763 Lakeshore Road in the Municipality of Clarington, Ontario. The Southern Site consists of the remediated former PG WMF and occupies 18 ha in Lot 3, Broken Front Concession "A" in the Municipality of Clarington, Regional Municipality of Durham, and Province of Ontario. The property is bounded by Lake Ontario to the south, by farmland owned by the Government of Canada to the east and west, and by Lakeshore Road to the north.



Figure 1: Port Granby Engineered Containment System and Waste Water Treatment Plant

The Port Hope Long-Term Waste Management Site

The Port Hope Long-Term Waste Management Facility (PH LTWMF) and the Port Hope Waste Water Treatment Plant (PH WWTP) are located at 2376 Baulch Road, Port Hope, Ontario (Figure 2). The site is south of Highway 401 between Brand Road and Baulch Road.



Figure 2: Port Hope Project Long-Term Waste Management Facility

Summary of Licensed Activities

The *PHAI Licence* [2], authorizes CNL to possess, transfer, manage, and store nuclear substances, with some exceptions, which are required for, associated with, or arise from historic waste remediation operations in the MPH, the Municipality of Clarington, and the Regional Municipality of Durham in the Province of Ontario.

Three phases of the PHAI have been defined as Phase 1: Planning and Preparation; Phase 2: Construction, Remediation and Closure; and Phase 3: Long-Term Monitoring and Maintenance.

The PHAI includes two distinct and separate projects:

The Port Granby Long-Term Low-Level Radioactive Waste Management Project

The Port Granby Long-Term Low-Level Radioactive Waste Management Project (PGP) involved the relocation of approximately 450,000 m³ of historic LLRW, located at a legacy waste management facility site on the shoreline of Lake Ontario in Southeast Clarington, to a new, engineered containment system at the PG LTWMF constructed approximately 700 m north of Lake Ontario.

The PGP is in Phase 3:

- Phase 1 (complete):
 - Securing regulatory approvals.
 - Management of waste at the PG WMF currently owned by the Government of Canada and operated by CNL on behalf of AECL, a federal Crown corporation; operation of this site was assumed from Cameco Corporation in 2012 March.
- Phase 2 (2011 to 2022) (completed in 2022):
 - Construction of the PG LTWMF.
 - Remediation of the PG WMF.
 - Transportation of LLRW from the PG WMF to the PG LTWMF for consolidation in a new engineered containment system.
- Phase 3 (2023 to 2120):
 - Activities related to the post-closure operations of the PG LTWMF associated with long-term maintenance and monitoring.

The Port Hope Long-Term Low-Level Radioactive Waste Management Project

The Port Hope Long-Term Low-Level Radioactive Waste Management Project (PHP) comprises the long-term management of the LLRW removed from the former Welcome Waste Management Facility (WWMF), the construction of a new PH LTWMF, the remediation of LLRW and specified industrial waste at various sites within the MPH, and the safe transportation of the waste to PH LTWMF for long-term storage.

The PHP will:

- Remediate sites containing historic LLRW and other specified industrial waste located in the MPH. These sites are described in the Legal Agreement [1].
- Consolidate and manage this waste in the new PH LTWMF, developed on lands composed of and adjacent to the former WWMF. The contents of the former WWMF have been incorporated into the PH LTWMF.

The historic LLRW within the community currently exists within temporary storage and management facilities and miscellaneous remediation sites.

The PHP is in Phase 2:

- Phase 1 (complete):
 - Securing regulatory approvals.
 - The management of the waste in the WWMF, currently owned by the Government of Canada and operated by CNL on behalf of AECL, a federal Crown corporation.
- Phase 2 (2012 to 2032):
 - Development of an LTWMF on and adjacent to the present site of the WWMF.
 - Incorporation of the current inventory of waste from the WWMF into the new PH LTWMF.
 - Remediation of sites within the MPH that are contaminated with historic LLRW.
- Phase 3 (2033 to 2120):
 - Activities related to the post-closure operations of the PH LTWMF associated with long-term care and maintenance.

Summary of New Licensed Activities

No new licensed activities were added in 2025.

Site Development

Significant modifications and continual improvements to PHAI facilities, processes, equipment, procedures, or programs are described in their relevant sections. Recent improvement initiatives have focused on aligning program requirements (e.g., Radiation Protection Program) to align with the actual risks identified through the operational experiences gained during project execution, especially lower risk small-scale sites remediation.

Financial Guarantees

Atomic Energy of Canada Limited retains ownership of the lands, assets, and liabilities associated with CNL's licences. The CNSC was previously provided with a letter from the Honorable G. Rickford [8], advising that as an agent of His Majesty in Right of Canada, AECL's liabilities associated with the decommissioning of the PHAI facilities are ultimately liabilities of His Majesty in Right of Canada. This financial guarantee remains valid and in effect as confirmed in 2025 in correspondence between CNL and CNSC [9][10].

1 Management System**1.1 Management System Program**

The PHAI adheres to CNL's Management System and Quality Functional Support Areas (FSAs). Refer to Section 1 of the *Annual Compliance Monitoring Report for Canadian Nuclear Laboratories (ACMR for CNL)* for 2025 [5] for details including a list of management system document submissions applicable to PHAI.

There were no revisions to PHAI management system documents submitted to CNSC staff during the reporting period.

The *Historic Waste Program Quality Plan* [11] supports the *Canadian Nuclear Laboratories Management System Manual* [12] and summarizes the processes and practices applicable to the PHAI licensed activities. These processes and practices comply with the quality management system defined in the CAN/CSA-ISO 9001:2015 [13].

The CNL management system aligns with CSA N286-12, *Management System Requirements for Nuclear Facilities* [14].

Contractors conducting work for the PHAI projects submit site-specific quality plans for CNL's review and approval to confirm compliance with the *Historic Waste Program Quality Plan* [11]. Contractor compliance with project-specific quality plans is examined as part of CNL's Compliance Program (Section 1.5).

1.2 Audits, Inspections and Self-Assessments

As per the requirements of the *Canadian Nuclear Laboratories Management System Manual* [12], both SCAs and Facilities conduct various audits, inspections, and self-assessments to ensure that the management system is functioning according to expectations and that any policy, programmatic, or procedural deficiencies are identified and appropriate actions taken to resolve them. CNL utilizes its *Integrated Assessment Plan* [15] to provide a collection of the internal and external assessment activities that are planned to be carried out for a specific year. The plan incorporates a three-year rolling plan for assessment activities and helps to ensure all SCAs are assessed during the cycle and allows CNL to plan targeted assessments based on data sources.

1.2.1 Audits

Refer to Section 1.2 of the *ACMR for CNL* [5] for a list of all CNL-wide audits for the reporting period. All actions resulting from audits, inspections, reviews, and self-assessments are managed and tracked through CNL's Improvement Action (ImpAct) system.

1.2.1.1 External Audits

The external audits conducted at PHAI in 2025 are summarized in Table 1.

Table 1: External Audits

Title	Type of Audit	No. of Non-Conformances Raised ^a	No. of Actions Raised ^{ab}	No. of Actions Completed ^a
ISO 9001:2015 Surveillance (S2) Audit (2025 Mar 3-4 Port Hope)	ISO 9001:2015	1	1	1
ISO 14001:2015 Audit by: Intertek 2025 May 21-22 for Port Granby	ISO 14001:2015 Environmental Management System	0	4	2

a Numbers of Non-Conformances, Actions Raised, and Actions Completed are specifically for PHAI sites.

b The actions raised may also include opportunities for improvement.

1.2.1.2 Internal Quality Audits

The internal audits completed in 2025 are summarized in Table 2.

Table 2: Internal Quality Audits

Title	Audit Scope	No. of Non-Conformances Raised ^a	No. of Actions Raised ^{ab}	No. of Actions Completed ^a
Nuclear Materials and Safeguard Management (2025-08-07 for Port Hope)	Material Balance Area operational implementation, controls, and safeguard of equipment as per NMSM program requirements for select sites	1	0	0
Environmental Protection Program for Port Granby	Evaluated controls and maintenance activities associated with the implementation of the EnvP Program.	0	0	0

a Numbers of Non-Conformances, Actions Raised, and Actions Completed are specifically for PHAI sites.

b The actions raised may also include opportunities for improvement.

1.2.2 Inspections

Canadian Nuclear Safety Commission Inspections

Canadian Nuclear Safety Commission inspections conducted at PHAI are listed in Table 3. As a result of the CNSC inspection CNL-PHAI-WMP-2025-02, CNL was issued a warning letter by the CNSC [16]. Corrective actions associated with the warning letter are in the process of closure. Work was ongoing at the time of writing.

Table 3: Canadian Nuclear Safety Commission Inspections Conducted at PHAI in 2025

Inspection No. CNL-PHAI- WMP	Area Inspected	No. of NNCs	No. of NNCs Closed ^a
2025-01	Baseline General Inspection of Packaging and Transport	3	3
2025-02	Baseline General Inspection at PH LTWMF and PG LTWMF	5	5

a Closed as of 2025 December 31.

NNC Notice of Non-Compliance.

International Atomic Energy Agency Inspections

International Atomic Energy Agency (IAEA) inspections conducted at PHAI are listed in Table 4.

Table 4: International Atomic Energy Agency Inspections Conducted at PHAI in 2025

Site (Facility/Location Code)	Inspection						Total
	PIV	DIV	RII	IIV	UI	CA	
Port Hope LTWMF (CNWF)	1	1	0	0	0	0	2
Canada Location Outside Facility (CN-2)	0	0	0	0	0	0	0

PIV Physical Inventory Verification
 DIV Design Information Verification
 RII Random Interim Inspection

IIV Interim Inventory Verification
 UI Unannounced Inspection
 CA Complimentary Access

Inspections by Other Regulatory Bodies

There were no inspections by other regulatory bodies at the PHAI in 2025.

1.2.3 Self-Assessments

In 2025, there were eight (8) self-assessments conducted at PHAI covering various aspects of the management system, including both SCAs and various facilities as listed in Table 5.

Table 5: List of Self-Assessments

Title	SCA
Compliance to Security Plan	Security
Land Use Assessment	Decommissioning Plan
Waste Management – PHAI Building Surveillance	Waste Management
FPOP Fire Program Audit Report	Fire Protection
Q1/Q2 PHAI FPOP Self-Assessment	Fire Protection
Q3/Q4 PHAI FPOP Self-Assessment	Fire Protection
ANSTO (Australian Nuclear Science and Technology Organisation) Benchmarking Meeting	Radiation Protection

Title	SCA
Assessment regarding use of plastic film for storage of radioactive materials at HWP sites	Radiation Protection
RP Program Assessment of PHAI Licenced Sites	Radiation Protection

1.3 Problem Identification and Resolution

1.3.1 Trending of Events Related to Operational Activities

As events at the PHAI occur, they are recorded in the ImpAct¹ system. This information is regularly reviewed to identify any trends.

Formal event-based trend reports continue to be prepared to predict any adverse trends and identify improvements. Trend ImpActs are listed in Table 6 along with ImpAct title and number of actions raised to address identified causal factors.

Table 6: Trend Improvement Actions (ImpActs) Raised

ImpAct #	Title	No. of Actions Raised
ERM-25-3715	HWP - Incidents involving Gas Utilities at HWP Work Sites	3

The use of a robust Problem Identification and Resolution Process continues to foster the internal reporting of lower significance level events (Level 4 and Level 3), thus affording the opportunity to implement continuous improvement initiatives.

Improvement Actions raised at the PHAI over the past five years are summarized by significance level² in Table 7. The increase in the number of ImpActs at PHAI since 2022 compared to previous years is attributed to an increased rigour for reporting Significance Level 3 and 4 events, which are considered minor problems. The increase is indicative of a positive reporting culture.

¹ ImpAct – Abbreviation for Improvement and Action. It is an internal process used to identify events, problems, non-conformities, opportunities for improvements, and personnel injuries. The process also identifies and tracks actions to correct or remediate problems.

² Significance level: Levels assigned to an event (SL1 being most significant, SL4 being least significant) based on the actual or potential result in safety, environmental, or business consequences.

Table 7: Number of Improvement Actions (ImpActs) Raised

Year	Level 0 ^a	Level 1	Level 2	Level 3	Level 4	Total
2021	1	0	5	31	132	169 ^{bc}
2022	4	0	6	41	199	250 ^b
2023	2	0	6	84	252	344 ^b
2024	4	0	4	58	290	356 ^b
2025	5	0	3	60	339	407 ^b

- a Level 0 will be assigned if the ImpAct is deemed to be a “non-problem” and a recommendation to close the ImpAct will be given.
- b Total does not include committee-based ImpActs.
- c Total does not include an additional five ImpActs and one committee-based ImpAct raised for tracking initiatives that span PHAI projects.

1.4 Management Reviews

A CNL Management System Review was completed for period 2024 January – 2025 March to evaluate the effectiveness of the management system. The review included the PHAI and concluded that the CNL management system is suitable to meet the necessary requirements, adequate, aligned with the strategic direction, and effective at supporting CNL to achieve corporate objectives.

1.5 Compliance Oversight

Activities performed by CNL and by PHAI consultants, contractors, and service providers are subject to CNL’s Compliance Program. An integrated approach to oversight, where one oversight process is used to confirm the suitability, implementation, and effectiveness of processes applied to PHAI project activities. Compliance objectives for contractual obligations, licensing requirements, acts and regulations, environmental management and protection plans, compliance plans, and technical specifications are outlined in the *Historic Waste Program Management Office Field Oversight Activities* procedure [17].

During the reporting period, identified non-compliances and opportunities for improvement from CNL’s compliance oversight activities continued to be dispositioned and implemented in accordance with program requirements.

2 Human Performance Management**2.1 Human Performance Program**

Although not formally part of the *PHAI LCH* [3], the PHAI utilizes applicable aspects of CNL's Human Performance Program as described in Section 2.1 of the *ACMR for CNL* [5].

2.2 Training Program

The PHAI adheres to the Corporate Training and Development FSA. Refer to Section 2.2 of the *ACMR for CNL* for details [5]. The *PHAI Training Plan* [18] defines the training processes applied to the work performed at the PHAI and promotes safe and effective workplaces through the cooperation of management, employees, contractors, and visitors.

Contractors conducting work for the PHAI projects submit site-specific training plans for CNL's review and approval to confirm compliance with the *PHAI Training Plan* [18]. Contractor compliance with project-specific training plans is examined as part of CNL's Compliance Program (Section 1.5). Compliance with the plan ensures that all project staff (including CNL employees and contractors) are qualified to perform their duties effectively and safely, using established processes and standards.

There were no revisions to the *PHAI Training Plan* [18] in the reporting period. For a list of Training Program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5].

In 2025, the effectiveness of the Training program at the PHAI has been enhanced through the following improvements and accomplishments:

- Supported heat stress and cold stress safety initiatives as part of pre-job brief packages providing field staff with awareness of working in hot or cold environments.
- Increased the number of qualified site-based practical trainers for Aerial Work Platforms (Articulating Boom 60 ft or Less and Scissor Lift), and Counter Balance Lift Truck, improving training capability and supporting ongoing practical training needs at the PHAI.
- Facilitated workshops focused on foundational understanding of CNL's Learning Management System (LMS) for Managers and for Employees, improving access to and visibility of training and qualification status.
- Delivered 261 courses at the PHAI site, continuing a commitment to providing training across the project.

The process to revise seven PHAI job-specific training plans to incorporate changes and align with revised or new requirements for LMS roles and certifications commenced in 2024 and continues into 2026. Changes are documented using the applicable change control processes until the training plans are updated.

2.2.1 Required Training

The PHAI maintains a sufficient number of qualified workers to carry on the licensed activities safely and in accordance with the *Nuclear Safety and Control Act* [6] and the regulations made under the NSCA.

All workers assigned to the PHAI are required to attend a PHAI Awareness session to gain understanding of the project. Contractors are responsible to qualify staff to PHAI requirements as well as maintain their training. Records are inspected regularly by CNL staff during compliance oversight activities (Section 1.5) and audits.

The PHAI applies the Systematic Approach to Training (SAT) for positions and roles identified on the *Application of the Systematic Approach to Training (SAT) at CNL* [19] controlled list. The SAT enlists the Training Analysis method – Job/Task Analysis to identify training requirements to be documented in position/role-specific Training Plans. The positions and roles at the PHAI that are on the controlled list [19] include:

- Group 1 – Health Physicist.
- Group 1 – Radiation Surveyor.
- Dangerous Goods (DG) Handler.
- Dangerous Goods (DG) Shipper.

In 2025, all PHAI SAT-listed positions and roles were reassessed for inclusion on the controlled list [19] based on the new SAT applicability assessment tool, as reported on in the 2025 *ACMR for CNL* [5]. The reassessment determined the following PHAI positions and roles no longer required a SAT-compliant training program, however, the training program was maintained until the next revision of the controlled list [19] in early 2026:

- Delegated Design Authority.
- Certified Industrial Hygienist.

These changes to the controlled list [19] were documented using the applicable change control processes.

All PHAI personnel, both employees and contractors, are adequately trained (including refresher training) to ensure safe operations and to conduct work under the *PHAI Licence* [2]. At no time in 2025 were employees assigned work for which they were not trained and qualified. The completion status of federally and provincially legislated training roles included in position-specific training plans at the PHAI is listed in Table 8. The completion status of CNL employee and manager/supervisor required training certification at the PHAI is provided in Table 9.

Beginning in 2025, the percent completion metric reflects only those employees who were required to complete training within the calendar year (i.e., new hires and employees newly assigned training due to role assignment or operational need). This metric does not represent the total number of employees at the PHAI who are qualified in each role or certification.

This change represents a deliberate shift from past reporting practice, in which completion percentages were calculated using the total number of employees assigned the training, regardless of whether they were due for completion in that year. The revised metric is based on industry benchmarking and will provide a more accurate reflection of the annual training demand.

Table 8: Status of Federally/Provincially Legislated Training at PHAI in 2025

Role	% Complete
OSH – Aerial Platform Operator – Articulating Boom 60 ft or less (Consolidated List)	64%
OSH – Aerial Platform Operator – Articulating Boom 85 ft Consolidated List)	64%
OSH – Aerial Platform Operator – Rough Terrain Scissor Lift (Consolidated List)	64%
OSH – Aerial Platform Operator – Scissor Lift (Consolidated List)	75%
OSH – Aerial Platform Operator – Single Up-Up (Consolidated List)	64%
OSH – Confined Space Entry (Consolidated List)	33%
OSH – Lift Truck Operator – Counter Balance (Consolidated List)	100%
OSH – Lift Truck Operator – Electric Pallet Jack (Consolidated List)	100%
OSH – Lift Truck Operator – Non-Electric Pallet Jack (Consolidated List)	100%
OSH – Working at Heights Worker (Consolidated List)	64%

Table 9: Employee and Manager/Supervisor Required Training at PHAI in 2025

Certification Title	% Complete 2025
Employee Required Training	
CNL General Safety Orientation	100%
Cyber Security (9 courses)	100%
Emergency Procedure Awareness	97%
Fire Prevention Training	94%
Hazard Prevention Program	100%
Human Performance Awareness – Fundamentals and Nuclear Safety Culture	100%
Indigenous Relations at CNL	100%
Information Asset Protection (IAP) Training	96%
Introducing the ImpAct Process at CNL	100%
Introduction to CNL's Management System	100%
Security Awareness	99%
Values and Ethics at CNL	90%

Certification Title	% Complete 2025
Violence and Harassment Prevention	98%
Waste Management Awareness	100%
WHMIS – 2015	94%
Fire Extinguisher (On-site worker only)	84%
PHAI (Port Hope Area Initiative) Awareness	95%
PHAI – Step up to Safety	95%
Manager Required Training	
Continuous Behavioural Observation Program (CBOP)	57% *(4 of 7)
Responsibility in Supervising Employees (RISE)	50% *(3 of 6)
Radiation Protection Required Training	
Group 4 Radiation Protection Training	100%
Group 3 Radiation Protection Training	91%
Group 2 Radiation Protection Training	83% *(10 of 12)
Group 1 Radiation Protection Personnel: Health Physicist	100% *(1 of 1)
Group 1 Radiation Protection Personnel: Radiation Surveyor (HWP)	100% *(4 of 4)

*Note: In cases where a small number of assignments significantly affects the completion rate, the number of completions versus assignments is provided below the percentage (e.g., 7 of 9).

2.2.1.1 Analysis of Trends

When interpreting the in-year completion metric for 2025, it is important to note that a lower percentage does not indicate that PHAI staff is broadly unqualified or unable to fulfill its obligations under the licence. Rather, it reflects that among employees who were assigned training in 2025, a smaller proportion completed the training within the calendar year. For smaller cohorts, even a few employees who have not yet completed training can disproportionately affect completion rates. At no time in 2025 were employees assigned work for which they were not trained and qualified.

Federally and Provincially Legislated Training

In 2025, the training data reported for PHAI reflects ongoing improvements in how CNL's LMS is being leveraged at PHAI to assign, track, and report federally and provincially legislated training. The current in- year completion metric is based on training assignments generated through position- specific training analysis and training plans. At the same time, many PHAI employees

receive required training through self-assignment or program-level assignment, which is outside of the formal governance pathways captured in the metric.

As a result, the completion percentages in Table 8 represent the performance of individuals who have been formally assigned training under the approved LMS governance model. While this means the in-year completion rate does not fully represent overall workforce qualification, it does highlight where assignment practices are evolving to more closely align with the governance model. Work is underway to harmonize assignment methods across the PHAI to ensure future reporting provides a more comprehensive and consolidated view of training completion.

Canadian Nuclear Laboratories Employee and Manager/Supervisor Required Training

In 2025, PHAI demonstrated strong performance across the majority of employee required training, with in-year completion rates for most core safety, security, and administrative modules ranging from 94% to 100%. Courses such as General Safety Orientation, Cyber Security, Hazard Prevention, Indigenous Relations, Waste Management Awareness, and Human Performance Awareness reached 100% completion among those assigned in 2025, indicating that essential employee required training is being completed in a manner that supports day-to-day operational needs and maintains foundational competencies at the site. Though still above the 90% performance benchmark, slightly lower in-year completion rates were observed for Fire Prevention (94%), WHMIS 2015 (94%), and Values and Ethics (90%). Fire Extinguisher practical training for on-site employees was the only employee required training below the 90% performance benchmark with a completion rate of 84%. Further investigation is required to understand the factors impacting this lower completion rate as they may include issues such as incorrect assignment to remote workers or other operational/scheduling factors affecting timely completion. Overall, these outcomes show that PHAI continues to maintain workforce competency sufficient to ensure operational needs and licensing requirements are met.

Manager required training showed greater variability in 2025, consistent with the small number of managers and supervisors assigned training at PHAI. The Continuous Behavioural Observation Program (CBOP) reached 57% in-year completion, while Responsibility in Supervising Employees (RISE) achieved 50%. These results reflect the timing of assignments and the small cohort size, where a single outstanding completion significantly influences the overall percentage. The data indicates normal progression through manager and supervisor training pathways rather than a reduction in management capability at the site.

Radiation Protection (RP) training results also reflect small cohort dynamics and assignment timing. Group 1 Health Physicist, Group 1 Radiation Surveyor, and Group 4 Radiation Protection training all achieved 100% in-year completion, while Group 3 and Group 2 Radiation Protection training reached 91% and 83% respectively. These lower in-year completions are the results of a small number of employees assigned the training during 2025 and who continue to progress through qualification requirements at year-end.

2.2.2 Contractor Training

Before accessing the PHAI sites, contractors completed, at a minimum, the following training:

- PHAI Awareness
- PHAI – Step up to Safety
- Contractor Safety Orientation
- Radiation Protection Group 4 (if required)
- CNL Supplier Code of Conduct (if required)

Canadian Nuclear Laboratories maintained training records of all workers (including contractors) conducting work under the *PHAI LCH* [3] during the reporting period, and verified training records for all contractors before work commencement and regularly through CNL compliance oversight activities (Section 1.5).

2.2.3 Training Evaluations Summary

During the reporting period, there were seven documented observations of trainer evaluations and no post-training effectiveness observation and coaching evaluations. These evaluations are reviewed by Human Performance and Training personnel and discussed as part of curriculum review committee meetings. Training Program improvements are managed through applicable training change processes.

Employees are provided an opportunity to give feedback on all training courses completed using manual and online course critique forms. During the reporting period, employee responses were collected using these forms. Course critique forms are reviewed periodically to identify opportunities for improvement and changes are managed through the applicable training change processes.

Curriculum review committees (CRCs) serve as a method of evaluating training program health and overall effectiveness of SAT-based training programs. At PHAI, all SAT-listed positions and roles are represented within their respective CNL corporate program CRCs (e.g., the PHAI Group 1 Health Physicist and Group 1 Radiation Surveyor are included in the corporate RP Program CRC, and the PHAI Dangerous Goods Handler/Shipper roles participate in the corporate Transportation of Dangerous Goods CRC). In addition to corporate CRC participation, the PHAI RP Program also conducted site-specific CRCs during 2025. This duplication of CRC activity for the RP program has been identified as an opportunity to improve efficiency, reduce administrative burden, and strengthen alignment with corporate governance practices by consolidating CRC efforts under a single corporate structure.

In addition to CRCs, the PHAI also conducted quarterly Training Touchpoint meetings in 2025 with the staff of HWP Environmental Protection (EnvP), PH WWTP and PG WWTP. These touchpoints function as an advisory forum for non-SAT-listed positions, supporting the line organization in confirming that training is being delivered to the right personnel at the right time. Through routine review of training needs, performance observations, and program requirements, the touchpoints provide a structured means of evaluating whether training is

effectively addressing operational needs and identifying areas where adjustments may strengthen performance. This approach enhances the overall effectiveness of the training program at PHAI by ensuring that training considerations are routinely assessed.

3 Operating Performance

The operating performance SCA covers the implementation and maintenance of a program for reporting information to the CNSC, including compliance monitoring, operational performance, event reporting, and various types of notifications. The PHAI's reporting program aligns with CNSC REGDOC-3.1.3, *Reporting Requirements for Waste Nuclear Substance Licensees, Class II Nuclear Facilities and Users of Prescribed Equipment, Nuclear Substances and Radiation Devices* [4].

3.1 Operating Program

Although not formally part of the *PHAI LCH* [3], the PHAI adheres to CNL's Conduct of Operations FSA. It is included in this report for information. Refer to Section 3.1 and Section 11.2 of the *ACMR for CNL* for details [5].

3.1.1 Environmental Remediation Operations

Environmental remediation operations involve the removal of the primary contaminants of potential concern which are indicative of historic LLRW (i.e., arsenic, uranium, radium-226, and thorium-230) and safely transporting the LLRW to the PH LTWMF.

The following subsections provide a summary of the PHAI's licensed remediation activities during the reporting period.

3.1.1.1 Port Granby Long-Term Waste Management Facility

Environmental remediation activities at the PG LTWMF are complete. The PGP Phase 3 activities conducted during the reporting period relate to maintenance and monitoring.

3.1.1.2 Port Granby Waste Water Treatment Plant

During the reporting period, the PG WWTP operations and maintenance activities were in Phase 3 of the PGP. The facility was operational for 84% of the time (211 days out of a possible 251 days). Process interruptions were related only to maintenance activities, intermittent disruptions to the electrical power grid, and low water levels in the equalization pond.

Water Collection and Treatment System

The wastewater collection system consists of groundwater interceptors, a collection pond (East Storm Pond), and an equalization pond. Waste water from within the PG LTWMF (leachate, pump stations 05 and 06) and East Gorge drainage recovery system (i.e., pump station 03) is pumped to an equalization pond. The water then enters the plant, where it is treated using a two-stage process: membrane bioreactor pre-treatment (Stage 1), followed by reverse osmosis (Stage 2).

In Stage 1, membrane bioreactors are used to pre-filter the influent to remove fine solids and biological material to supply high quality feed to the reverse osmosis membranes. In Stage 2,

the treated water enters the reverse osmosis system where contaminants such as radium, uranium, and arsenic are removed. The water is forced under high pressure through a membrane. The contaminants are rejected by the membrane, and the treated water flows through to the pH adjustment tank. At this point, the treated water is discharged through a gravity drainpipe extending 120 m into Lake Ontario.

The rejected contaminants (i.e., reverse osmosis brine) are collected, then safely transported to the PH WWTP for further treatment. The total amount of reverse osmosis brine sent to the PH WWTP was 2,245 m³. This is an increase of 3.4% compared to the volume sent to the PH WWTP in 2024 (2,171 m³).

Water Treatment and Monitoring

During the reporting period, influent and effluent samples were collected from the PG WWTP from fixed locations at weekly intervals. Grab samples were taken from a sample point on the pipeline feeding the treatment system and represented the treatment inflow. A total of 64,974 m³ of influent was treated by the PG WWTP in 2025. This represents an increase of approximately 18% in volume from 2024 recorded volumes (55,221 m³). A total of 31,353 m³ of final effluent was discharged to Lake Ontario, a decrease of 3% from recorded volumes in 2024 (32,321 m³). The increase in influent is due to water drained from the East storm pond and running the plant in recirculation mode to produce more brine while not discharging to Lake Ontario. Lower final effluent discharge was due to pond sterilisation treatment activities, maintaining lower pond levels and a plant shutdown in August and early September.

The PG WWTP was the sole source of effluent discharge. An automatic composite sampling unit collects samples at regular intervals before the water is discharged to Lake Ontario. Refer to the *Port Hope Area Initiative Waste Management Project Environmental Protection Annual Compliance Report for 2025* [7] for details.

3.1.1.3 Port Hope Long-Term Waste Management Facility

During the reporting period, the PH LTWMF was operating in Phase 2 of the PHP. Phase 2 project activities include construction of an engineered containment system and associated infrastructure and support facilities. During the reporting period, the activities and upgrades were as follows:

- Completed remediation and temporary restoration in the Forested Brush Area for Clearing.
- Completed tree removal to support remediation verification for the West and Central Forest Area.
- Commenced the remediation of the West and Central Forest Area.
- Completed the installation of a groundwater collection system, upgrades to greywater sewer system, and surface water collection ditches in the Forested Brush Area for Clearing.

- Initiated the installation and commissioning of the primary and secondary leachate collection systems including power distribution and forcemain installation.
- Maintained the PH LTWMF in accordance with CNL established maintenance and operational procedures.
- Continued with the receipt and long-term storage of historic LLRW from various PHP remediation sites.
- Continued with monitoring of the design profile and shaping of Cells 1, 2, and 3.

3.1.1.4 Port Hope Waste Water Treatment Plant

During the reporting period, the PH WWTP was operating in Phase 2 of the PHP. The facility was operational for 92% of the time (i.e., 337 days out of 365 days). Process interruptions were related to maintenance activities, intermittent disruptions to the electrical power grid, and operational restrictions of the PH LTWMF.

Water Collection and Treatment System

The waste-water collection system consists of surface water interceptor ditches, groundwater collection drains, a main collection pond, and three settling ponds. The water treatment systems include a former water treatment building and the PH WWTP, and twin 100 mm diameter discharge pipelines for routing of treated effluent to Lake Ontario.

The purpose of the former water treatment building was to capture groundwater and surface water that contacted impacted materials deposited at the historic WWMF. The system was designed to reduce arsenic, radium-226, and uranium concentrations and to discharge the treated water to Lake Ontario. The former water treatment building was not operated during the reporting period.

The PH WWTP uses the same collection ditches and collection pond as the former water treatment building and employs inclined plate clarifiers, sand filtration, reverse osmosis, mechanical vapor recompression evaporation, and slurry dryers to treat the collected surface water and groundwater. The system uses these technologies to remove over 99% of the arsenic, uranium, and other heavy metals in the influent water.

Final effluent is held in a storage tank where it is monitored for conductivity and pH adjusted prior to release. The treated water is then discharged through an underground pipe which extends 3 km to Lake Ontario via the same twin 100 mm diameter pipelines that were used by the former water treatment building.

Water Treatment and Monitoring

Influent and effluent samples were collected from the PH WWTP from fixed locations at weekly intervals during the reporting period. Grab samples were taken from a sample point on the pipeline feeding the treatment system and represented the treatment inflow.

A total of 299,000 m³ of influent was collected by the PH WWTP in 2025. Factors such as improved storm water management and fluctuating annual precipitation will affect the quantity of water requiring treatment. This represents an increase of approximately 8% from 2024 recorded volumes. A total of 111,480 m³ of final effluent was discharged to Lake Ontario. This represents a decrease of 3% from recorded volumes in 2024.

A composite automatic water sampling unit collects samples at regular intervals before the treated water is discharged to Lake Ontario. Refer to the *Port Hope Area Initiative Waste Management Project Environmental Protection Annual Compliance Report for 2025* [7] for details.

Operations of Residuals Management Systems

Regular operations of the residual management systems occurred in conjunction with normal water treatment activities during the reporting period. The residuals management equipment includes the clarifiers, evaporators, slurry dryers, and belt press systems. Both sludge and slurry processing streams continue to be optimized.

Residual Solids Treatment and Disposal

During the reporting period, the two solid waste streams operated as designed. The evaporators treat concentrate produced by the reverse osmosis systems and are designed to reduce the overall volume of this waste through the production of condensate. The condensate is combined with permeate generated from the reverse osmosis units and discharged to Lake Ontario. The evaporated concentrate (slurry) is fed to mechanical dryers for further dewatering. The dried slurry is transferred into bulk storage totes as a flowable solid. The totes are then transferred to the PH LTWMF for long-term management.

Dissolved solids in the influent liquid waste stream are chemically precipitated and collected as sludge in the clarifier vessels. These solids are stabilized using polymer compounds and held in batches before dewatering in the belt filter press. The filtration step removes excess water from the sludge before deposition into bulk storage totes which are then transferred to the PH LTWMF for long-term management. The decanted water is discharged back to the clarifiers or to the main collection pond for recirculating treatment.

A combined total of 832 tonnes of residual solid wastes (including miscellaneous plant waste such as contaminated filters and personal protective equipment and clothing) were generated by the PH WWTP in 2025. This represents an increase of approximately 4% from recorded 2024 production.

3.1.1.5 Major Sites

The PHAI sites where LLRW is previously known to have existed are classified as major sites. In addition, there are several known sites, which have been identified through earlier radiological investigations that are also included in this section.

Alexander Street Ravine

The Alexander Street Ravine site required remediation because Eldorado end-dumped radium refinery wastes into the natural ravine. The site consists of a wooded ravine with steep forested slopes. A wetland creek flows through the site to the Waterworks West site. It is bounded to the south by the Canadian Pacific rail embankment, to the north by forested lands, to the west by a golf course, and to the east by residential properties.

Due to various environmental constraints and in consideration of public feedback, special circumstances protocols have been followed for a large portion of the original Alexander Street Ravine site and the residential woodlot packages. Approximately 63% of the wooded area in Alexander Street Ravine was saved from clearcutting through the application of special circumstances protocols, focusing remediation on areas of radiological impacts only.

The Special Circumstance Decision Package for the largest portion of the ravine property (privately owned) has been finalized, and the property owner has approved the decision. A targeted remediation was performed on the municipality-owned parcels and adjacent residential lot. Remediation at the Alexander Street Ravine site began in 2024 June and was completed in 2025 March. The remediation design identified approximately 2,150 m³ of impacted soils for remediation. As remediation progressed, more impacted material was identified, resulting in a final remediated volume of 6,735 m³. Impacted material remaining below the groundwater table requires further consideration as a Special Circumstance. Restoration was completed in the fall of 2025. Final transfer of Care and Control back to the MPH is planned for the spring of 2026 when a final visual inspection can be completed following snow melt.

Lions Park

At Lions Park, the Lions Club parking lot was repaved in the spring of 2025 to support the reopening of the park to the public. In May 2025, much of the park was returned to the property owner, the MPH, and reopened to the public. The year ended with ongoing closeout activities. Project closeout is near completion, and the site is scheduled to be fully returned to the MPH in the spring of 2026.

Coal Gas

At Coal Gas, restoration was completed in the fall of 2025 with topsoil placement, installation of sod, and the planting of trees. The privately owned John Street properties were returned to the private property owner. The year ended with ongoing closeout activities. The Coal Gas portion of the site is scheduled to be returned to the property owner, the MPH, in 2026.

Port Hope Harbour and Centre Pier

The Port Hope Harbour consists of approximately 83,000 m³ of LLRW and the Centre Pier consists of approximately 82,600 m³, resulting in a total of 165,600 m³ of LLRW. The Port Hope

Harbour site is the most complex site of the PHAI. Contamination in the harbour exists as a sediment layer overlying the till and bedrock surface through the approach channel and turning basin. The sediment thickness varies, extending to as much as 4 m deep. The Centre Pier waste is comingled LLRW and industrial waste.

During the reporting period, mechanical dredging of the harbour was completed. Work to replace and reinforce the harbour walls continued through 2025, focusing on the Pier East wall and the Turning Basin West wall. The main structural elements of the centre pier and harbour walls are now complete. Installation of the concrete cope beam and wall finishes—such as bollards and mooring cleats—is currently underway.

Stone revetments have been completed along the Ganaraska and Queens Wharf, with placement continuing at the Turning Basin North and South walls. Excavation of the Centre Pier is progressing well; the sediment processing area and crane pad have been demolished, and remediation below these areas is complete. Overall, approximately 90% of the excavation and backfilling for the Centre Pier has been finished, including remediation and backfill of the industrial waste areas.

Waterworks West (West Beach)

The Waterworks West site required remediation because Eldorado in-filled a wetland on Port Hope's waterfront with radium refinery wastes. The site consists of a flat beachfront area set back approximately 30 m from Lake Ontario. The site is bounded to the east by the Port Hope Municipal Water Treatment Plant, to the north and west by Canadian National Railway property, and to the south by Lake Ontario beachfront.

The remediation design identified approximately 6,500 m³ of impacted soils for remediation. Remediation at the Waterworks West site began in 2023 January and was completed in 2024 April. As the remediation progressed, more impacted material was identified, resulting in a remediated volume of 23,592 m³.

Special circumstances are being applied for remaining impacted soils below the groundwater table, which would have required constant dewatering due to the influx of Lake Ontario. Remediation around Alexander Creek, running through the middle of the site, was delayed due to a change in policy at Fisheries and Oceans Canada that resulted in their rescinding the previous authorization to perform work around this creek and requiring a new permit to be obtained. Discussions with the Ministry of Natural Resources and Forestry, Fisheries and Oceans Canada, Curve Lake First Nation, and Hiawatha First Nation were held throughout 2023 and 2024 to develop a revised restoration plan for the site as required by the new Fisheries and Oceans Canada authorization.

Restoration of the eastern portion of the site was completed in the fall of 2025. Tendering of the restoration scope for the western portion of the site to Indigenous contractors began in the fall of 2025, with contract award planned for early 2026. Restoration of the creek with the revised restoration plan is expected to be completed in the summer of 2026.

Highland Drive Area

The Highland Drive Landfill Area is composed of three separate and unique sites: Highland Drive Landfill Site, the Highland Drive South Ravine, and the Pine Street Consolidation Site. The original estimates of LLRW at the Highland Drive Landfill consist of approximately 51,900 m³ of LLRW commingled with or overlain by municipal solid waste. This number was increased to approximately 74,000 m³ based on updated output from predictive modelling software prior to the beginning of remediation.

The remediation work in the Highland Drive Landfill site is unique in that it involves the removal of LLRW in a former municipal solid waste landfill. A site-specific remedial verification approach was developed and accepted by CNSC staff. The contractor commenced waste haulage from the landfill area in 2023 January. Excavation extended beyond the original design limits both vertically and laterally and the amount of waste remaining is unknown. The current remediation phase is expected to be completed by April 2026. Pending remediation verification, direction for further excavation to expand the excavation footprint or installation of risk management measures may be provided. Restoration of Stage 2 has been completed, and additional restoration is anticipated to begin in 2026 however depending on the extent of remediation required, its possible a portion of the restoration will continue into 2027.

The Highland Drive South Ravine consists of 5,400 m³ of LLRW in pond sediment and the north slope of the ravine. Design for the Highland Drive South Ravine was awarded in 2023 March, and remediation started in the winter of 2023. The permeable reactive barrier that forms a part of this site's scope was completed in 2025 along with the restored creek and outfall structures leading to an adjacent property. The site is currently on a winter pause and final restoration work is scheduled for the Spring of 2026, including topsoil placement and tree planting.

The Pine Street Consolidation Site consisted of 47,000 m³ of LLRW consolidated in a mound during the initial cleanup of Port Hope properties in the late 1970s to early 1980s. Remediation and restoration was completed in 2022. In 2022, the Highland Drive Landfill remediation contractor took care and control of the site and continues to maintain, monitor, and inspect the Pine Street Consolidation Site.

3.1.1.6 Property Remediation and Restoration

The PHAI property remediation and restoration involves the investigation of urban area (formerly Ward 1) properties and a selected number of rural area (formerly Ward 2) properties in Port Hope for the presence of the four signature contaminants of potential concern which are indicative of historic LLRW: arsenic, uranium, radium-226, and thorium-230. These properties consist primarily of privately owned (residential and business) and municipal properties, including road allowances.

Characterization, also known as the initial survey, is used to confirm the presence of LLRW on a given site and determines how the site is subsequently managed. Characterization field activities include interior radon gas detector deployment, and a preliminary above surface gamma survey followed by an intrusive subsurface investigation. The intrusive subsurface

investigation involves borehole drilling, soil sampling, and possibly sampling of building or other types of material; gamma radiation measurements of boreholes and soil cores; and x-ray fluorescence measurements of soil boring samples for uranium and arsenic. Selected soil samples undergo independent, accredited analytical laboratory testing. Where historic LLRW is suspected to be present, further analysis for 17 secondary contaminants of potential concern is undertaken. If the presence of LLRW is confirmed, then the site proceeds to delineation followed by design, remediation, including the safe transportation of the waste to the PH LTWMF for storage, and restoration activities.

Properties continued to be evaluated for evidence of radon gas exceedances. Where exceedances were found to be a result of LLRW contamination on the property, mitigation systems were evaluated for installation.

Characterization of Properties with External Lots

Of the 4,879 properties with external lots, 97% have been characterized. Of the characterized exterior properties, 24% have been identified with LLRW. Of the exterior properties that have not been characterized, 31 sites are in progress, and the remaining sites have access challenges including refusal from the property owner to participate or have not provided access to their property (such as railway lands).

Characterization of Properties with Interior Spaces

Of the 4,281 properties with interior spaces, 99% have been characterized. Of the characterized properties with interiors, 6% have been identified with LLRW or potential LLRW. Of the interiors that have not been characterized, 11 sites are in progress, and the remaining are on hold due to property owner access challenges.

Characterization of Roads and Road Allowances

Of the 469 municipal road allowance sites, 85% have been characterized. Of the characterized road allowance sites, 40% have been identified with LLRW. Of the remaining road allowance sites that have not been characterized, characterization activities are in progress and expected to be completed in 2026.

Remediation and Restoration

Site remediation requires detailed planning prior to field execution to ensure compliance with the *PHAI Licence* [2], federal and provincial regulatory requirements, municipal permits and requirements, technical codes and standards, and specific contractual obligations with property owners. Pre-construction planning is structured into a series of steps including pre-mobilization, mobilization, site preparation, excavation, remediation verification, back-filling, restoration, stakeholder property walk-down inspections, issue of Certificate of Substantial Performance, and warranty period. Some sites have added complexities such as a high groundwater table or historical buildings with challenging structural integrity. Soil remediation activities can involve detailed geotechnical assessments, engineered shoring, precision excavations, specialized

equipment, and detailed water management strategies. The range of restoration scopes are broad and can require the complete demolition of a home and/or occupant relocation. Construction planning is typically performed on a group of contiguous properties and roads to limit property owner disruptions.

3.1.1.7 Temporary Storage Sites

The Pine Street North Extension Temporary Storage Site consists of two asphalt storage pads and a Quonset storage building. The site remains in use for emergency and after-hours storage of contained impacted soils, temporary storage of items recovered as part of the historic artefact recovery program, building debris contaminated with LLRW, roll-off storage bins containing residual amounts of impacted soils, and equipment used during off-site remedial activities.

During the reporting period, there were no major upgrades or developments to the site.

3.2 Reporting Requirements

The PHAI maintains a program for reporting information to the CNSC in accordance with the *PHAI LCH* [3] and REGDOC-3.1.3 [4]. The program includes compliance monitoring, operational performance reporting, event reporting, and various types of notifications. During the reporting period, CNL prepared and submitted the written reports required by the *PHAI LCH* [3].

The PHAI adheres to CNL's Compliance Program. For a list of reporting program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5].

3.2.1 Reportable Events to the Canadian Nuclear Safety Commission

During the reporting period, twelve (12) events occurred at the PHAI that were deemed reportable to the CNSC. They are listed in Table 10. All reportable events are posted on the external CNL website on a quarterly basis.

Table 10: Reportable Events to the Canadian Nuclear Safety Commission at PHAI in 2025

ImpAct No.	Title	SCA	Site
ERM-25-0756	HWP HCP Minor Traffic Accident	Packaging and Transport	Harbour Centre Pier
ERM-25-1617	HWP - Internet Outage at PH LTWMF IAEA Portal Monitor	Safeguards and Non-Proliferation	PH LTWMF
ERM-25-2997	HWP - PH HCP - Haul Truck Traffic Incident 2025-08-05	Packaging and Transport	Harbour Centre Pier
ERM-25-0080	HWP - Port Granby Vehicle Fire	Emergency Management and Fire Protection	Port Granby
ERM-25-1804	HWP – PH LTWMF West Forest Surface Water Release	Environmental Protection	PH LTWMF
ERM-25-0543	HWP- Harbour Centre Pier - WSP - Propane Release from Pressure Safety Valve	Emergency Management and Fire Protection	Harbour Centre Pier
ERM-25-0904	HWP - Small Scale Sites Property Remediation and Restoration TO3 50 Margaret Street Site – Natural Gas Smell with First Responders on Site	Emergency Management and Fire Protection	Private Property
ERM-25-2349	HWP - Highland Drive Landfill - Public Access to Zone 2 Area On-Site	Security	Highland Drive Landfill
ERM-25-2856	HWP - Smoke observed at PH LTWMF Zone 3 Mound	Emergency Management and Fire Protection	PH LTWMF
ERM-25-2927	HWP - Small Scale Sites Task Order 3 Gas Leak - July 24 2025	Emergency Management and Fire Protection	Private Property
ERM-25-3981	HWP - HCP - Clean Fill Haul Truck Driver Medical Incident on Site	Emergency Management and Fire Protection	Harbour Centre Pier
ERM-25-3025	HWP - HCP - Leg Fracture	Conventional Health and Safety	Harbour Centre Pier

The annual count of reportable events over the last five years, as part of ongoing compliance monitoring is summarized in Table 11.

Table 11: Number of Reportable Events to the CNSC at PHAI Over the Last 5 Years

2021	2022	2023	2024	2025
5	17	10	8	12

3.2.2 Reportable Events to Other Regulators

Reports to other regulatory agencies consisted of:

- No Hazardous Occurrence Investigation Reports (HOIR) were made to Employment and Social Development Canada (Refer to Section 8 for further details).

-
- Four (4) events were reported to the Ontario Ministry of Environment, Conservation and Parks Spills Action Centre, and CNSC staff were proactively notified:
 - ERM-25-1327 Dust Plume at Harbour Centre Pier site.
 - ERM-25-1804 Pumps failed during storm causing water to leave zoned area at Port Hope Long Term Waste Facility. Surface water was released to the environment that exceeded the Provincial Water Quality Objectives limit for uranium.
 - ERM-25-3024 Grouting and wash water entered creek at Highland Drive South Ravine site.
 - ERM-25-3120 Turbidity exceedance of Permit to Take Water requirements.
 - No events were reported to Environment and Climate Change.
 - No events were reported to Fisheries and Oceans Canada.

4 Safety Analysis

As per the *PHAI LCH* [3], the Safety Analysis Program is not applicable to PHAI.

5 Physical Design

The physical design SCA relates to activities that affect the ability of systems, structures, and components to meet and maintain their design basis, given new information arising over time and taking changes in the external environment into account.

5.1 Design Program

The PHAI adheres to CNL's Design Authority and Design Engineering FSA. The Design Authority and Design Engineering FSA maintains and controls the design basis for all design activities performed at the PHAI, and it ensures that design is planned, executed, verified and documented according to applicable codes, standards, and regulatory and customer requirements. Refer to Section 5.1 of the *ACMR for CNL* for details [5].

The PHAI employs the CNL suite of design planning, development, and review procedures to the design works produced internally, and the *Oversight of Engineering Agencies* procedure [20] to design works produced externally by others. External designs form the majority of designs related to the PHAI.

In 2022/2023, an extent of condition assessment was conducted on each of the detailed design description reports listed in the *PHAI LCH* [3]. Based on the results of the extent of condition assessments, a new set of design basis documents were developed to address identified discrepancies and consolidate eight documents into three. In accordance with the *PHAI LCH* [3], CNSC staff were notified [21] of the new design basis document in 2024 (*Port Hope Project Remediation Sites Design Basis* [22]). Canadian Nuclear Laboratories proposed that it replace some of the design documents listed in the *PHAI LCH* [3] as compliance verification criteria. In 2024, CNL received conditional approval for the three new design basis documents (*PHP Remediation Sites Design Basis* [22], *PH Long-Term Waste Management Facility Design Basis* [23], and *PG Long-Term Waste Management Facility Design Basis* [24]), with the condition being to satisfy some CNSC comments currently in process.

In accordance with the *PHAI LCH* [3], CNSC staff were notified [25] of the revision to *Port Hope Project Remediation Sites Design Basis* [22] implemented in the reporting period as shown in Table 12. For a list of design program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5].

Table 12: PHAI Design Program Document Submissions in 2025

Document Title	Document Type	Reason for Change	Correspondence #
Port Hope Project Remediation Sites Design Basis [22]	DR	Clarity in site Clean-Up criteria, Consistent section hierarchy, improved figures, clarifying statements, overall editorial review.	4501-CNNO-25-0006-L [25]

5.1.1 Changes to Design or Equipment

The Configuration Management FSA provides the framework to maintain and control the physical configuration of structures, systems, and components at CNL. Configuration Management applies to all design, operations, decommissioning, and maintenance activities at CNL sites. Configuration Management applies to all non-nuclear and nuclear documents, policies, programs, and procedures that contain information or instructions that could impact the following:

- Design (both regulatory and owner prescribed) and licensing basis.
- Any plant physical configuration.
- Any configuration item or information.

Configuration Management allows for maintaining and controlling the configuration of nuclear facilities within approved safety margins and regulatory requirements when changes or non-identical replacement parts are required. Configuration Management ensures that changes are assessed, approved, designed, implemented, commissioned, and placed into service within the safety envelope at all CNL sites in accordance with the design requirements.

A root cause analysis was completed in 2023 to identify and correct previously identified programmatic issues. The root cause analysis identified five corrective actions and eight remedial actions to be taken by CNL. As of 2024 May 23, all actions were closed. Subsequent effectiveness reviews on select actions were completed in 2025 May and 2025 December and indicate that the actions have been effective.

Design or equipment changes at PHAI were performed following CNL's Engineering Change Control Program, supplemented by *Historic Waste Program Management Office Application of Engineering Change Control and Oversight* [26]. During the reporting period, three (3) Engineering Changes, seventeen (17) Reduced Risk Engineering Changes and eleven (11) Item Equivalency Evaluation Requests were initiated.

There were no Category 1 and Category 2 design and equipment changes at the PHAI in 2025 according to the engineering change control process.

6 Fitness for Service

The fitness for service SCA covers activities that affect the physical condition of structures, systems, and components to ensure that they remain effective over time. This includes programs that ensure all equipment is available to perform its intended function when called up to do so.

6.1 Fitness for Service Program

The PHAI adheres to CNL's Fitness for Service FSA through its Maintenance and Work Management, Equipment Reliability, and Preventative Maintenance programs. Refer to Section 6.1 of the *ACMR for CNL* for details [5].

There are no PHAI-specific licensing basis documents under the Fitness for Service Program.

6.1.1 Planned Maintenance, Testing & Inspections

The maintenance programs for the PH WWTP and PG WWTP follow the guidelines in CNL's company-wide *Fitness for Service Program* [27]. Company-wide requirements are used in conjunction with the computerized maintenance management system called PMXpert®, for which six additional procedures were developed and implemented for the PHAI. PMXpert facilitates scheduling of preventive maintenance work orders at various intervals to maintain equipment service as recommended by the original equipment manufacturers. Corrective maintenance work orders are used when equipment needs repair or replacement.

The maintenance departments at both the PH WWTP and PG WWTP generate weekly key performance indicator reports as a means of tracking the performance of each respective maintenance program. Closed preventive maintenance work orders are measured against open preventive maintenance work orders to ensure that pre-determined benchmark percentages are maintained or exceeded. These reports are distributed to all PH WWTP and PG WWTP staff members and records are maintained.

Predictive maintenance is performed annually throughout the PH WWTP and PG WWTP. This includes vibration analysis and infrared thermography of mechanical and electrical equipment by both a subcontracted agency and in-house subject matter experts. High voltage assets have predictive maintenance work orders and inspections performed annually by a subcontracted agency to ensure fitness for service. Reports are generated by all parties, and corrective maintenance work orders are generated based on the findings in the reports.

Oil samples are taken on regularly scheduled intervals from critical equipment, these samples are analyzed, and reports issued by the contracted agency. Corrective maintenance work orders are generated based on the reports and all records are maintained.

6.1.2 Equipment Fitness for Service/Equipment Performance

All equipment in the PH WWTP and PG WWTP, whether in use or not, is maintained in a ready-to-operate state. All preventative maintenance work orders are completed as scheduled

regardless of operational status. There are no systems, structures or components that cannot be operated when called upon, except for ongoing plant reconfiguration at the PG WWTP.

At the PG WWTP, residual solids processing has ceased and has been moved to the PH WWTP. As a result, the solids processing equipment at the PG WWTP has been taken out of service and is no longer maintained in a ready-to-operate state. Dismantling of the solids processing equipment at the PG WWTP commenced late in 2025 and will continue through 2026. A Scope of Work has been developed and will be the basis of a contract award for the completion of Phase 1 of the dismantling project which is the removal of all equipment and infrastructure related to solids processing.

6.1.3 Condition of Structures

The PH WWTP and PG WWTP remain early in their lifecycle and, as such, show little to no sign of structural or superficial degradation.

7 Radiation Protection

The Radiation Protection (RP) SCA covers the implementation of the RP Program, in accordance with the *Radiation Protection Regulations* [28].

7.1 Radiation Protection Program

The PHAI adheres to CNL's Radiation Protection FSA. Refer to Section 7 of the *ACMR for CNL* for details [5]. The *Port Hope Area Initiative Radiation Protection Plan (PHAI RP Plan)* [29] defines the RP measures applicable to PHAI projects and is consistent with CNL's *Radiation Protection Program Requirements* [30]. The purpose of these RP measures is to ensure that the execution of PHAI projects complies with relevant regulations pursuant to the *Nuclear Safety and Control Act* [6]. The program addresses the radiation hazards associated with the PHAI and ensures that surface and airborne contamination, and radiation doses to employees and public are monitored and controlled.

Contractors conducting work for the PHAI projects submit site-specific RP plans for CNL's review and approval to confirm compliance with the *PHAI RP Plan* [29]. Contractor compliance with project-specific RP plans is examined as part of CNL's Compliance Program (Section 1.5).

In accordance with the *PHAI LCH* [3], CNSC staff were notified [31] of the revision to the *PHAI RP Plan* [29] implemented in the reporting period to strengthen risk-informed dose management, work planning, and oversight as described in Section 7.1.1. The revisions to the *PHAI RP Plan* [29] reflect an alignment with the assessed risks associated with the remaining work which is mainly focused on remediation of small-scale sites. For a list of RP Program document notifications applicable to multiple CNL licences refer to Section 1 of the *ACMR for CNL* [5]. For a summary of any RP Program reviews, improvements, and revisions, refer to Section 7 of the *ACMR for CNL* [5].

7.1.1 As Low As Reasonably Achievable (ALARA) Initiatives and Activities

The CNL RP Program includes, as an integral part, an As Low As Reasonably Achievable (ALARA) Program. This ALARA Program is designed to ensure the provision of RP is optimized for activities involving sources of radiation exposure so that the magnitude of individual and collective doses and the likelihood of incurring exposures resulting from activities are kept ALARA and that economic and social factors are taken into account. The integrity of the ALARA Program is managed through routine monitoring and reviews of dose records to confirm that no adverse trends or exceedance have occurred.

As Low As Reasonably Achievable initiatives and activities are practiced in every facet of the PHAI activities and is specifically addressed through the implementation of the PHAI EnvP Program's monthly and quarterly deployment of PHAI environmental radon monitors and thermoluminescent dosimeters.

In 2025, significant enhancements to the PHAI RP Program were implemented through the release of Revision 8 of the *PHAI RP Plan* [29], which introduced targeted improvements that

strengthened ALARA performance across all PHAI construction, remediation, and long-term monitoring activities. These changes improved dose control, optimized radiological work practices, and reduced worker exposure potential through more precise zoning, monitoring, and planning requirements.

Key ALARA improvements implemented in 2025 included:

- Major contamination control modernization, including elimination of mandatory removable contamination surveys in favour of total contamination assessments, and introduction of new administrative control levels at 50% of release limits to ensure early intervention before contamination increases.
- Optimization of work zones through introduction of Areas with Radiological Contamination (ARCs) for Small Scale Sites, enabling more efficient zoning that reduces time spent in higher-hazard areas while maintaining radiological rigor.
- Risk-based dosimetry requirements for internal and external exposures, ensuring that monitoring is applied where most effective and reducing unnecessary administrative burden while maintaining ALARA.
- Enhanced ALARA work planning, integrating detailed hazard and dose assessments into Integrated Work Control (IWC), Radiation Safety Assessments (RSAs), and radiological work planning to identify critical tasks and optimize controls before work begins.

Collectively, these program enhancements improved the efficiency and effectiveness of radiation protection across PHAI operations. They reduced overall exposure potential, minimized time spent in radiological zones, and strengthened the systems that ensure individual and collective doses remain well below Action Levels and regulatory dose limits. These improvements support worker safety, regulatory compliance, and public confidence while upholding the ALARA principle across all PHAI activities.

In 2025, as part of ongoing ALARA initiatives, the RP Program implemented enhancements introduced through Revision 8 of the *PHAI RP Plan* [29] including a structured review of historical individual dose records and radiological work activities. This review was used to confirm continued eligibility for NEW designation in accordance with the *Radiation Protection Regulations* [28]. Workers whose roles and exposure potential no longer met the regulatory definition of a NEW were formally deregistered and reclassified as non-NEWs. This initiative represents an optimization of the RP Program by ensuring that dosimetry, training, and administrative controls are applied in proportion to actual radiological risk. Aligning worker designation with realistic exposure potential supports ALARA by reducing unnecessary conservatism while maintaining effective protection of workers, members of the public, and the environment.

7.1.2 Contamination Control

Internal radiation hazards exist in the form of loose radioactive material, known as contamination, which may enter the body by inhalation, ingestion, or absorption. As a result,

routine monitoring across the project is completed to confirm that current activities have been executed while minimizing the spread of radioactive contamination.

Contamination events that occurred at the PHAI during the past five years are summarized in Table 13. During the reporting period, the PHAI experienced one (1) contamination event involving personal clothing. There were no skin and radiological work clothing contamination events, and two (2) workplace contamination events. No exceedances of CNSC regulatory dose limits or radiation dose action levels were observed as a result of the contamination event.

Table 13: Contamination Events

	Skin and Clothing Contamination				Workplace Contamination	
	Skin ^a	Personal Clothing ^b	Radiological Work Clothing ^c	Total	Surface ^d	Vehicle / Materials ^e
2021	1	3	0	4	1	0
2022	0	1	0	1	0	0
2023	5	5	0	6 ^d	1	0
2024	0	1	0	1	0	0
2025	0	1	0	1	2	0

- a Contamination found is greater than 4 Bq/cm² (~750 cpm over 15.5 cm²) beta-gamma or 0.1 Bq/cm² (23 cpm) alpha.
- b Contamination detected above background on personal clothing
- c Contamination detected is greater than 850 Bq/cm² beta-gamma or greater than 30 Bq/cm² alpha.
- d Total number of skin and clothing contamination events (four events included both skin and personal clothing contamination).
- e Fixed/loose contamination in excess of limits specified for the applicable radiological zone
- f Removable surface contamination detected above background.

In 2025, one contamination event occurred during planned routine work and normal operations. During the task, a worker's left leg was submerged in Radiation Zone 3 water, contamination spread to their personal clothing. Assessed dose to skin was determined to be 0 mSv due to short duration on clothing and no contamination observed on skin.

In 2025 there were two instances of workplace surface contamination events. Both were associated with south dump wall at the LTWMF within the Radiological Safety Zone 2. During daily contamination surveys on 2025-04-16 and 2025-04-17 these events occurred, the maximum values measured were 0.52 Bq/cm² and 0.46 Bq/cm² alpha respectively, beta values were within zoning limits, 0.79 Bq/cm² and 0.46 Bq/cm² respectfully. This area is expected to have some spillage, and part of the process includes cleaning, however, it was recorded to capture the zone exceedance.

7.1.3 Dose Control

External radiation hazards exist in the form of gamma radiation.

During the reporting period, CNL conducted routine radiation dose rate surveys at the PH and PG WWTPs and LTWMFs. Canadian Nuclear Laboratories routinely reviewed the results of radiation dose rate surveys conducted at remediation sites by contractor staff. The dose rate surveys conducted in the reporting period demonstrate that dose rates are not exceeding the radiological safety zone limits, as defined in the *PHAI RP Plan* [29].

7.1.4 Sealed Sources

Radioactive source management activities during the reporting period were conducted in accordance with *Radioactive Source Management* [31] which establishes requirements for the control, registration, inventory, and security of all radioactive sources on site.

A registry of all radioactive sources was maintained throughout the calendar year, including sources held under the *PHAI Licence* [2] as well as any sources temporarily present on site under separate CNSC licences. The registry captures source identification details, activity, storage location, and custodianship to ensure traceability and accountability.

During the reporting period, three (3) radioactive sources with activities exceeding the CNSC Exemption Quantity (EQ) were managed under this program.

All sources above EQ were appropriately registered, labelled with registered source tags, securely stored when not in use, and included in the annual physical inventory verification.

A physical verification of all radioactive sources was completed annually. No discrepancies were identified during the annual inventory.

7.2 Dosimetry

Radiation dose refers to the energy deposited or absorbed in materials through which it passes. Accordingly, dosimetry is the measurement, calculation, and assessment of that radiation dose absorbed by the human body. This applies both internally, due to ingested, inhaled, or absorbed radioactive substances, or externally due to irradiation by sources of radiation. External radiation hazards exist in the form of gamma radiation.

Dosimetry results are compared to PHAI action levels and CNSC regulatory dose limits. Action levels are a specific dose of radiation that, if reached, may indicate a loss of control of part of the RP Program, and triggers a requirement for specific action to be taken. Action levels are site-specific parameters that are typically set near the upper bounds of normal operating performance and below regulatory dose limits. Regulatory dose limits are defined in the *Radiation Protection Regulations* [28].

All PHAI workers who have a reasonable probability of receiving an occupational effective dose in connection with a nuclear substance or nuclear facility in excess of 1 mSv per calendar year are designated as a NEW [28].

7.2.1 Interpretation of Reported Dose Quantities

The PHAI uses the Chalk River Laboratories (CRL) Licensed Dosimetry Service Provider for external and internal dosimetry for CNL staff, contingent workers, and some subcontractors. The PHAI contractors responsible for operating various PHAI sites utilize a CNSC Licensed Dosimetry Service Provider for their staff and subcontractors.

Canadian Nuclear Laboratories site and facility staff and the PHAI contractors who work in or frequently enter Controlled Areas and are assessed to have the potential to receive elevated external radiation doses, shall have their external radiation exposure monitored in accordance with the *PHAI RP Plan* [29]. Where there is a reasonable possibility that a worker could receive an effective dose greater than 5 mSv in a one- year dosimetry period, external dose monitoring shall be performed using a CNSC- licensed dosimetry service provider, in accordance with the CNSC Dosimetry Services Regulations. Licensed dosimeters are used to monitor external deep and shallow dose and to ensure regulatory dose recording and reporting requirements are met. The CNL dosimetry operates on a quarterly monitoring period. All external dosimetry is read on a routine basis. Visitors and non-NEWs entering radiological areas shall have their radiation exposures controlled in a manner commensurate with the assessed radiological risk. Electronic personal dosimeters may be used where required by ALARA assessments. Canadian Nuclear Laboratories uses these to monitor dose and to confirm trigger limits and dose control points identified within the *PHAI RP Plan* [29] are not exceeded.

The internal Dosimetry Program is primarily provided to the CNL operations and RP staff who work in close proximity with radiological hazards as assessed by the RP Program. The bioassay is tested for the presence of uranium through in vivo submissions. All results for uranium bioassay reported were well below CNL's bioassay recommendation level of minor, which demonstrates the effectiveness of ALARA work practices in minimizing radiation exposure and ensuring compliance with radiological safety principles.

The CNL Personnel and Contractor Radon Exposure Program for PHAI sites monitors employees, contingent workers, and subcontractors and PHAI contractors due to the increased work required to support Phase 2 activities. Phase 2 workers were assessed and assigned track-etch type personal radon detectors, and doses were calculated and recorded if the monthly or quarterly average exceeded the trigger level of 150 Bq/m³. One (1) exceedance of the trigger level was identified in the reporting period. A dose estimation was completed for the trigger level exceedance, which resulted in an individual maximum estimated dose of 0.19 mSv. The estimated doses from radon exposure are included in Table 14.

The PHAI continues to ensure that doses to workers are kept ALARA by strict compliance to its Dosimetry Program as stipulated in the *PHAI RP Plan* [29].

7.2.2 Radiation Doses to Personnel

The dose data in Table 14, Table 15, and Table 16 represent the doses delivered at PHAI for all monitored persons, which includes employees (including those in temporary employment such as students), contractors, subcontractors, and visitors.

The maximum individual effective dose during the current five-year dosimetry period (2021 January 01 to 2025 December 31) is 1.65 mSv, received by a CNL contractor's employee.

In 2025, 433 non-NEWs had their effective dose assessed. The maximum dose received by a non-NEW in 2025 was 0.0 mSv.

Lens of the eye dosimetry was not required for any of the work performed at the PHAI sites in 2025 as there was no work conducted that was assessed to have a potential exposure to the lens of the eye of greater than 1 mSv.

Table 14: Distribution of Effective Dose for 2025

Monitored Person Type		Dose Range (mSv)							Total # of Persons	Individual Dose (mSv)			Collective Dose (person·mSv)
		0	0.01- 0.50	0.51- 1.00	1.01- 5.00	5.01- 10.00	10.01- 20.00	>20.00		Max	Avg All ^a	Ø Avg ^b	
		Number of Persons											
NEW	Employee	5	158	0	0	0	0	0	216	0.25	0.05	0.07	10.41
	Contractor	1151	66	0	0	0	0	0	1217	0.27	0.00	0.08	5.31
	Visitor ^c	238	5	0	0	0	0	0	243	0.07	0.00	0.04	0.24
Non-NEW	Employee	0	0	0	0	0	0	0	0	-	-	-	-
	Contractor	8	0	0	0	0	0	0	8	0	0	-	0
	Visitor ^d	425	0	0	0	0	0	0	425	0	0	-	0
Totals		1880	229	0	0	0	0	0	2109	0.27 ^e	0.01 ^f	0.07 ^g	15.96 ^h

a Average of all measured doses that include the zero dose value, rounded to two decimal places.

b Average of all measured doses that exclude the zero dose value, rounded to two decimal places.

c Visitor NEWs are persons who were historically employee and/or contractor NEWs but have returned to the site as visitor while retaining their historical NEW status or frequented often enough to warrant NEW status as per the previous revision of *PHAI RP Plan* [29].

d Visitor dosages are measured by personal electronic dosimeters.

e Maximum individual dose (mSv) of all measured doses.

f Collective dose (person.mSv) divided by total number of persons that include the zero dose value, rounded to two decimal places.

g Collective dose (person.mSv) divided by total number of persons that exclude the zero dose value, rounded to two decimal places.

h Sum of all measured collective doses (person.mSv).

Ø No zero values.

- Not Applicable.

Table 15: Distribution of Equivalent Dose to the Skin for 2025

Monitored Person Type		Dose Range (mSv)							Total # of Persons	Individual Dose (mSv)			Collective Dose (person·mSv)
		0	0.01- 0.50	0.51- 1.00	1.01- 5.00	5.01- 10.00	10.01- 20.00	>20.00		Max	Avg All ^a	Ø Avg ^b	
		Number of Persons											
NEW	Employee	58	158	0	0	0	0	0	216	0.36	0.05	0.07	10.52
	Contractor	1154	63	0	0	0	0	0	1217	0.27	0.00	0.08	5.18
	Visitor ^c	4	5	0	0	0	0	0	9	0.07	0.02	0.04	0.18
Non-NEW	Employee	0	0	0	0	0	0	0	0	-	-	-	-
	Contractor	8	0	0	0	0	0	0	8	0	0	-	0
	Visitor ^d	1	0	0	0	0	0	0	1	0	0	-	0
Totals		1225	226	0	0	0	0	0	1451	0.36 ^e	0.01 ^f	0.07 ^g	15.88 ^h

a Average of all measured doses that include the zero dose value, rounded to two decimal places.

b Average of all measured doses that exclude the zero dose value, rounded to two decimal places.

c Visitor NEWs are persons who were historically employee and/or contractor NEWs but have returned to the site as visitor while retaining their historical NEW status or frequented often enough to warrant NEW status as per the previous revision of *PHAI RP Plan* [29].

d Visitors on contractor sites are not monitored for their equivalent dose to the skin. Visitors issued a thermoluminescent dosimeter by CNL are monitored for their equivalent dose to the skin.

e Maximum individual dose (mSv) of all measured doses.

f Collective dose (person.mSv) divided by total number of persons that include the zero dose value, rounded to two decimal places.

g Collective dose (person.mSv) divided by total number of persons that exclude the zero dose value, rounded to two decimal places.

h Sum of all measured collective doses (person.mSv).

Ø No zero values.

- Not Applicable.

Table 16: Summary of Dose Components Received as a Result of Licensed Activities for 2025

Monitored Person Type		External Penetrating Dose (mSv)					External Surface Dose (mSv)					Extremity Dose (mSv)				
		Total # Persons	Max	Avg All ^a	Ø Avg ^b	Collective (p·mSv)	Total # Persons	Max	Avg All ^a	Ø Avg ^b	Collective (p·mSv)	Total # Persons	Max	Avg All ^a	Ø Avg ^b	Collective (p·mSv)
NEWS	Employee	216	0.25	0.05	0.07	10.41	216	0.36	0.05	0.05	10.52	3	0.36	0.15	0.23	0.45
	Contractor	1217	0.27	0.00	0.08	5.31	1217	0.27	0.00	0.00	5.18	15	9.89	0.91	1.36	13.63
	Visitor ^c	243	0.07	0	0.04	0.24	9	0.07	0.02	0.02	0.18	0	-	-	-	-
Non-NEWS	Employee	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
	Contractor	8	0	0	0	0	8	0	0	0	0	0	-	-	-	-
	Visitor ^d	425	0	0	-	0	1	0	0	0	0	0	-	-	-	-
Total		2109	0.27	0.01	0.07	15.96	1451	0.36	0.01	0.01	15.88	18	9.89 ^e	0.78 ^f	1.08 ^g	14.08 ^h

a Average of all measured doses that include the zero dose value, rounded to two decimal places.

b Average of all measured doses that exclude the zero dose value, rounded to two decimal places.

c Visitor NEWS are persons who were historically employee and/or contractor NEWS, but have returned to the site as visitor while retaining their historical NEW status or frequented often enough to warrant NEW status as per the previous revision of *PHAI RP Plan* [29].

d Visitor dosages are measured by personal electronic dosimeters.

e Maximum extremity dose (mSv) of all measured doses.

f Collective extremity dose (person.mSv) divided by total number of persons that include the zero dose value, rounded to two decimal places.

g Collective extremity dose (person.mSv) divided by total number of persons that exclude the zero dose value, rounded to two decimal places.

h Sum of all measured extremity doses (person.mSv)

Ø No zero values.

- Not Applicable.

7.2.2.1 Discussion of Dose Data

All effective radiation doses were measured to be less than the assigned dose control point of 1 mSv for all individuals on the PGP and PHP and well below all action levels for the PHAI. No anomalies were observed in the data above.

7.2.2.2 Radiation Dose Changes or Trends

The maximum individual effective dose for the last five years is shown in Figure 3. As the project continues, radiation doses for Phase 2 activities are expected to remain consistent with the previous calendar year. In 2025, the maximum individual effective dose to all workers (employees, contractors, and students) was 0.27 mSv; the collective dose to all workers was 15.96 mSv. The collective doses illustrated in Figure 3 for 2021 and 2022 are separate due to having separate licences in the past. Dose to CNL site and facility staff was not measured independently per licence; only the total dose per person was recorded, irrespective of the site at which the person worked (i.e., licensed activities at both Port Hope and Port Granby). This result is expected given no significant change in the scope of work. The maximum individual dose for all worker categories remains far below the regulatory dose limit of 50 mSv per year [28].

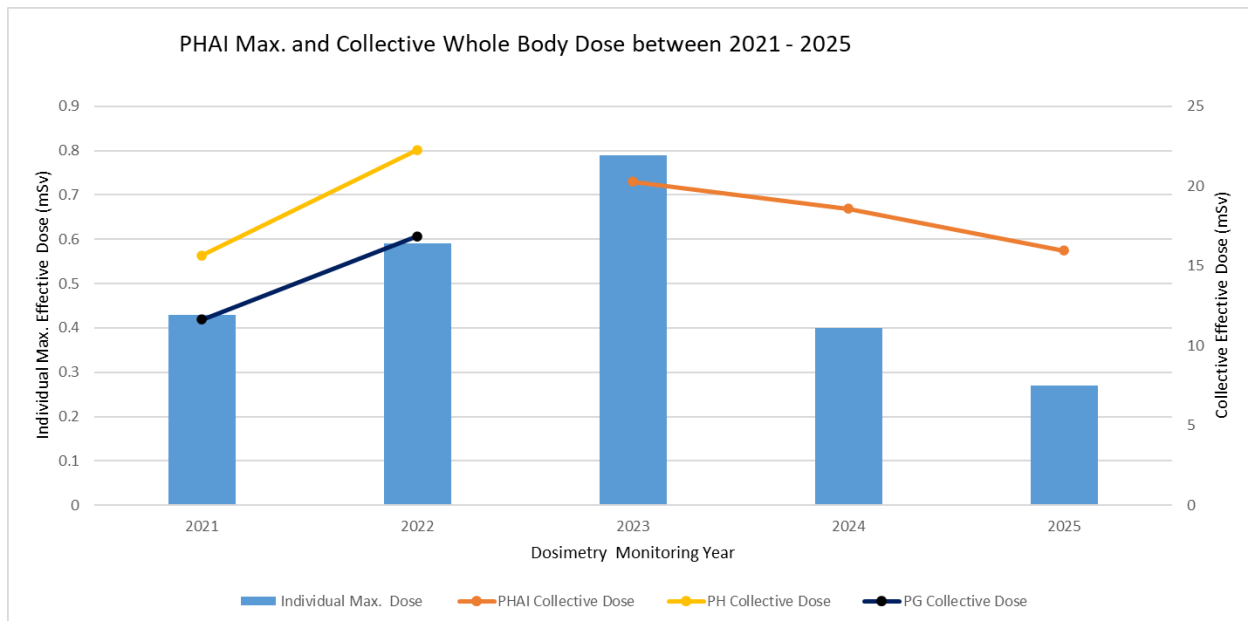


Figure 3: Maximum Individual Effective Dose and PHAI Collective Dose (2021 to 2025)

7.2.3 Program Exceedances

There were no exceedances of action levels or regulatory dose limits in the Dose Monitoring Program for the 2025 calendar year.

7.2.4 Radiation Dose to Members of the Public

The total effective radiation dose limit to members of the public is specified in the *Radiation Protection Regulations* [28] as 1 mSv (1,000 µSv) per calendar year. It is a calculated value, in millisieverts, which takes into account the absorbed dose to all organs of the body, the type of the radiation, and the sensitivities of each organ to radiation.

Public dose specific to the locations around the PG LTWMF and PH LTWMF is calculated from the maximum radon and thermoluminescent dosimeter measurements taken along the facility fence lines, with a conservative occupancy period of 60 hours per year. As such, the provided public doses do not apply to any other area in Port Granby or Port Hope. Note that liquid effluent releases are not included in the calculation of public dose, as the effluent is not used for drinking.

Results from the 2025 monitoring program confirm a public dose less than 6% of the annual dose limit for members of the public. The public doses for a five-year period for the PGP and the PHP are provided in Table 17 and Table 18 respectively.

Table 17: Port Granby Project Radiation Dose to Members of the Public

Year	Annual Public Dose (mSv)	% Public Dose Limit (1 mSv)
2021	0.04	4.1
2022	0.03	3.3
2023	0.01	1.0
2024	0.03	2.8
2025	0.03	3.3

Note: Difference between annual public dose (mSv) and % public dose limit (1 mSv) is due to rounding.

In 2025, the dose to members of the public from the PGP is less than 4% of the applicable regulatory dose limit.

Table 18: Port Hope Project Radiation Dose to Members of the Public

Year	Annual Public Dose (mSv)	% Public Dose Limit (1 mSv)
2021	0.02	2.3
2022	0.03	2.8
2023	0.02	2.0
2024	0.03	3.0
2025	0.05	5.4

Note: Difference between annual public dose (mSv) and % public dose limit (1 mSv) is due to rounding.

In 2025, the dose to members of the public from the PHP is less than 6% of the applicable regulatory dose limit.

8 Conventional Health and Safety

The conventional health and safety SCA covers the implementation of a program to manage the non-radiological workplace safety hazards and to protect personnel and equipment.

8.1 Conventional Health and Safety Program

The PHAI adheres to the CNL Occupational Safety and Health (OSH) FSA. Refer to Section 8 of the *ACMR for CNL* for details [5]. The *Port Hope Area Initiative Occupational Safety and Health Plan (PHAI OSH Plan)* [33] has been developed to define the OSH Program applicable to PHAI projects and is consistent with CNL's corporate OSH Program.

Contractors conducting work for the PHAI projects submit site-specific health and safety plans for CNL's review and approval to confirm compliance with the *PHAI OSH Plan* [33]. Contractor compliance with project-specific health and safety plans is examined as part of CNL's Compliance Program (Section 1.5).

There were no revisions to the *PHAI OSH Plan* [33] in the reporting period. For a list of Conventional Health and Safety Program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5]. For a summary of any Conventional Health and Safety Program reviews, improvements, and revisions, refer to Section 8 of the *ACMR for CNL* [5].

The HWP MO's OSH Program priorities for 2025 consisted of the following:

- Implemented revised Hazardous Energy Control program at the PHAI CNL sites.
- Facilitated a collaborative team-building meeting to strengthen coordination between the contractor and CNL Health and Safety Specialists.
- Strengthened oversight approach by integrating diverse field staff experience to modernize the oversight strategy.
- Completed seasonal campaign messaging around mental health, cold stress, fitness for duty, stop/pause work, and slip/trip/fall.
- Delivered CNL Mechanically Elevated Work Platforms (MEWP) training for applicable HWP CNL staff.
- Developed the Health and Safety framework to self-perform remediation activities within the PHAI scope.

8.1.1 Site Safety and Health Committee

The HWP Site Safety Health Committee (SSHC) provides a forum for CNL and its employees to work together to ensure a safe and healthy working environment is provided and maintained for its employees. The HWP SSHC is dedicated to the oversight, promotion, and improvement of the health and safety of all employees of the HWP and engages both employees and management in the development of solutions on health and safety concerns in the workplace. The HWP SSHC is composed of 15 members, including two co-chairpersons and a recording secretary. One of the co-chairpersons represents employees, and the other represents

management. Members (and their alternates) are selected from the employee base. At least half of the HWP SSHC members are employees who do not exercise managerial functions. During the reporting period, the HWP SSHC had nine (9) regularly scheduled meetings and one (1) special meeting.

The HWP SSHC placed a strong focus on improving our inspection process in 2025. Our inspection team grew to include an OSH advisor and the Area Owner (or delegate) which improved communication, accountability and clarity. An inspection workflow and guide was developed to improve and create better consistency with reporting as well as the inspection process itself. We shared twelve employee awareness campaigns and safety notices covering topics such as preventing slips, trips, and falls, parking awareness, wildlife collisions, proper disposal of combustible materials, and more. The SSHC also continued to grow in size and diversity with both employer and employee reps allowing for better representation throughout the HWP.

8.1.2 Inspections

Workplace inspections are completed to systematically observe practices and conditions pertaining to all work activities and locations. This process encompasses recording the observations, classifying the hazard level, developing remedial actions, and following up on actions. Inspection findings are shared as appropriate.

The HWP SSHC schedules inspections throughout the year and must ensure that all parts of the workplace are inspected at least once annually. A minimum of one HWP SSHC member completes each inspection in conjunction with the responsible manager, or designate, for the work area.

During the reporting period:

- The SSHC conducted 15 inspections.
- HWP health and safety oversight staff completed 1,996 field inspections and walk downs. The majority (80%) of the observations were positive compliance. The remaining opportunities for improvement or neutral oversights were documented, tracked, and communicated to project teams for follow-up.

8.1.3 Hazardous Occurrence Investigation Reports and Lost-Time Injuries

The different types of hazardous occurrences are defined under the *Canada Occupational Health and Safety Regulations* [34]. Annual reports are provided to the Minister Employment and Social Development Canada as required by regulation. During the reporting period, there were no hazardous occurrences (disabling injuries) for CNL staff at the PHAI reported to Employment and Social Development Canada. CNL staff receives copies of these notifications when they occur, as per the requirements of the CNL REGDOC-3.1.3 [4].

A five-year summary of injury rate data is provided in Table 19 and the summary of lost time injuries during the reporting period is provided in Table 20.

Table 19: Summary of Injury Rate Data

	2021	2022	2023	2024	2025
Site Employees					
Person Hours Worked	408,630	407,956	502,175	652,548	450,902
Lost-Time Injuries	2	0	0	1	0
Working Days Lost	12	0	0	6	0
Frequency ^a	1.03	0	0	0.31	0
Severity ^b	6.17	0	0	1.84	0
Site Contractors^c					
Lost Time Injuries	0	1	1	0	1
Working Days Lost	0	46	1	0	41

- a Frequency rate equals # of Lost-Time Injuries x 200 000 hrs of exposure divided by person hours worked (based on 100 Full Time workers).
- b Severity rate equals # of Working Days Lost x 200 000 hrs of exposure divided by person hours worked (based on 100 Full Time workers).
- c The Number of Person Hours worked are not divulged by Contractors. As such, Frequency and Severity rates cannot be calculated.

Table 20: Summary of Lost Time Injuries in 2025

ImpAct ID	Date	Event Description	Site
ERM-25-3025	2025 August 7	A subcontractor worker was injured while relocating equipment on a barge at the Port Hope Harbour. The worker was walking across a wooden plank cover that connected two barge sections when the board shifted unexpectedly. This caused the worker's leg to slide between the sections of the barge, resulting in a fall. The opposite leg left bearing the full weight of the fall had sustained a fracture.	HCP

9 Environmental Protection

The Environmental Protection SCA covers programs that monitor and control all releases of nuclear and hazardous substances into the environment, as well as their effects on the environment as a result of licensed activities.

The release of hazardous substances is regulated by the CNSC; Environment and Climate Change Canada; and the Ontario Ministry of Environment, Conservation and Parks through various acts and regulations.

The PHAI's EnvP Program aligns with CNSC REGDOC-2.9.1, *Environmental Protection: Environmental Principles, Assessments and Protection Measures* [35].

9.1 Environmental Protection Program

The PHAI adheres to CNL's EnvP Program. Refer to Section 9 of the *ACMR for CNL* for details [5]. The following documents define the methods and protocols followed in performing the environmental monitoring specific to the PHAI:

- *Port Granby Project Environmental and Biophysical Monitoring Plan* [36]
- *Port Hope Project Environmental Protection Plan* [37]
- *Port Hope Project Environmental and Biophysical Monitoring Plan* [38]
- *Port Hope Area Initiative Project Dust Management and Requirements Plan* [39]

Contractors conducting work for the PHAI projects submit site-specific EnvP plans for CNL's review and approval to confirm compliance with applicable CNL environmental management and protection plans. Contractor compliance with project-specific EnvP plans is examined as part of CNL's Compliance Program (Section 1.5).

There were no revisions to PHAI EnvP documents submitted to CNSC staff during the reporting period. For a list of EnvP Program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5]. For a summary of any EnvP Program reviews, improvements, and revisions, refer to Section 9 of the *ACMR for CNL* [5].

9.2 Effluent and Environmental Monitoring

The effluent and environmental monitoring results are contained in a separate report, the *Port Hope Area Initiative Waste Management Project Environmental Protection Annual Compliance Report for 2025* [7], which is submitted separately to the CNSC.

10 Emergency Management and Fire Protection

The Emergency Management and Fire Protection SCA covers emergency plans and emergency preparedness programs that exist for emergencies and for non-routine conditions.

10.1 Emergency Preparedness Program

The PHAI adheres to CNL's Emergency Preparedness FSA. Refer to Section 10.1 of the *ACMR for CNL* for details [5]. The *Port Hope Area Initiative Emergency Plan (PHAI Emergency Plan)* [40] describes the planning and operational requirements for the response to an emergency directly or indirectly affecting the PHAI. The PHAI Emergency Plan is consistent with CNL's corporate Emergency Preparedness Program, which ensures that all components of emergency preparedness and response are effectively maintained. Contractors conducting work for the PHAI projects submit emergency preparedness plans to CNL for review and approval to confirm compliance with the *PHAI Emergency Plan* [40]. Contractor compliance with project-specific emergency preparedness plans is examined as part of CNL's Compliance Program (Section 1.5).

PHAI maintained and/or confirmed the compliance of its Emergency Preparedness Program to applicable requirements in 2025. Compliance was confirmed by conducting field assessments at the PHAI sites to evaluate the implementation of site and building emergency procedures.

There were no revisions to PHAI Emergency Preparedness Program documents submitted to CNSC staff during the reporting period.

10.1.1 Drills and Exercises

During the reporting period, the comprehensive PHAI five-year drill and exercise plan continued to be implemented. This plan outlines the drills that are to be conducted, and an approximate timeline for those drills. All drills were completed as per regulatory and programmatic requirements.

10.1.2 Training

In the reporting period, the following training related to Emergency Management was conducted:

- Emergency Steward and Officer-in-Charge training for staff at all PHAI facilities.
- H2S Alive course was delivered for Wastewater Treatment Operations and support staff.

10.1.3 External Collaborations

During the reporting period, there was repeated engagement with Clarington, Durham, Port Hope, and Northumberland Region first responders. Including annual meetings as well as other independent engagements.

10.1.4 Unplanned Emergency Events

In the reporting period, there were no unplanned events at the PHAI that required activation of the CRL Emergency Operations Centre.

10.2 Fire Protection Program

The PHAI adheres to CNL's Fire Protection FSA. Refer to Section 10.2 of the *ACMR for CNL* for details [5]. The *Port Hope Area Initiative Fire Protection Plan* [41] includes a combination of site level fire plans; fire notification and protection systems; inspections and training on hazard identification, control, and emergency response; and fire extinguisher training.

There were no revisions to PHAI Fire Protection Program documents submitted to CNSC staff during the reporting period.

10.2.1 Fire Response Drills

During the reporting period, all required annual fire response drills were completed.

10.2.2 External Collaborations

During the reporting period, tours were conducted with Clarington Emergency and Fire Services and Port Hope Fire and Emergency Services. A successful full-scale exercise was conducted in coordination with Clarington Emergency and Fire Services.

10.2.3 Third Party Audits & Inspections

There was no need for a third-party review because no facility modifications were proposed with the potential to negatively impact fire protection.

10.2.4 Fire Hazard Analysis

No fire hazard analyses are required for the PHAI.

11 Waste Management

The Waste Management SCA covers internal waste-related programs that form part of a facility's operations up to the point where the waste is removed from the facility to a separate waste management facility. This also covers the planning for decommissioning.

Canadian Nuclear Laboratories has a well-established Waste Management Program. Waste deliveries originating from various PHAI sites including Cameco, waterfront sites, small-scale sites, the harbour sediment, the Highland Drive landfill, and other waste sources such as on-site waste transfers, were made to the PH LTWMF.

11.1 Waste Management Program

The PHAI adheres to CNL's Waste Management FSA. Refer to Section 11.1 of the *ACMR for CNL* for details [5].

The Waste Management Program adheres with the following:

- CNSC REGDOC-2.11.1, *Waste Management, Volume I: Management of Radioactive Waste* [42].
- CSA N292.0, *General Principles for the Management of Radioactive Waste and Irradiated Fuel* [43].
- CSA N292.3, *Management of Low- and Intermediate-Level Radioactive Waste* [44].

In accordance with the company-wide program, the PHAI follows general waste management plans, as well as project-specific documentation to ensure that waste activities are performed in a safe and environmentally responsible manner which meets or exceeds applicable regulations and standards and minimizes current and future environmental impacts and liabilities.

In accordance with the *PHAI LCH* [3], CNSC staff were notified [45] of the revision to the *Port Hope Long-Term Waste Management Facility Preliminary Safety Case* [46] implemented in the reporting period. For a list of Waste Management Program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5].

A CNSC Inspection was conducted in 2025 June. A Notice of Non-Compliance (NNC) was issued to ensure that all radioactive wastes placed into the PH LTWMF are characterized and included in the site inventory in accordance with paragraph 36(1)(a)(i) of the *Nuclear Substances and Radiation Devices Regulations* [47]. In response, a verification of the PH LTWMF inventory was completed to confirm that all waste emplaced in the PH LTWMF was characterized [48]. To further document the characterization methodology, a process/memo to provide details relating to the Waste Characterization of PPE/Misc Waste from the PH WWTP was prepared. Additionally, improvements to the waste management process, such as quality control requirements and traceability of characterization, were incorporated in the PH LTWMF waste management process documentation.

11.1.1 Waste Inventory

The PH LTWMF engineered containment system contains an inventory of 2,673,016 metric tonnes, and an estimated total activity of 3.30E+14 Bq, as summarized in Table 21.

Table 21: Stored Waste Inventory in the PH LTWMF

Waste Type	Source	Total Estimated Quantity (nearest metric tonnes)	Total Estimated Radioactivity (Bq) [Calculated]	Primary Radionuclides
Radioactive	PH WWTP ^a	6,923	1.08E+11	Uranium and Uranium Progeny
Radioactive	PH LTWMF –On-Site Waste Placement (Welcome Site, Pond Expansion, Forested Area, Other on-site stockpiles)	918,455	1.75E+14	Uranium and Uranium Progeny
Radioactive	Cameco Waste	62,296	4.34E+13	Uranium and Uranium Progeny
Radioactive	Small-Scale Sites (Package 1, 2, 3, 3.1, 3.2, 4, 5, 5.1, Task Order 2, Task Order 3, Task Order 5, Task Order 6, 45 Lavinia, Interiors, Characterisation)	245,289	3.76E+11	Uranium and Uranium Progeny
Radioactive	Temporary Storage Sites (Centre Pier, Pine St Extension, Sewage Treatment Plant, Storage Cell)	78,723	2.34E+11	Uranium and Uranium Progeny
Radioactive	Harbour Centre Pier	414,654	7.70E+13	Uranium and Uranium Progeny
Radioactive	Highland Drive Landfill	543,993	3.09E+13	Uranium and Uranium Progeny
Radioactive	Highland Drive South Ravine	19,718	2.53E+10	Uranium and Uranium Progeny
Radioactive	Pine Street Extension	77,932	6.81E+11	Uranium and Uranium Progeny
Radioactive	Waterfront Sites (Viaducts, Waterworks East, Waterworks West, Strachan St, Mill St., Alexander Ravine)	221,007	7.39E+11	Uranium and Uranium Progeny
Radioactive	Construction Monitoring Program	27,423	4.20E+10	Uranium and Uranium Progeny

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Waste Type	Source	Total Estimated Quantity (nearest metric tonnes)	Total Estimated Radioactivity (Bq) [Calculated]	Primary Radionuclides
Radioactive	Port Granby LTWMF	1,953	1.18E+10	Uranium and Uranium Progeny
Industrial Waste	Chemetron Lagoon	1,984	0.00E+00	Industrial Waste
Industrial Waste	Lion's Park Site	37,090	1.35E+12	Industrial Waste with minor Uranium/Uranium Progeny
Industrial Waste	Coal Gasification Plant	15,575	1.23E+10	Industrial Waste with minor Uranium/Uranium Progeny
Total Waste Stored at the PH LTWMF up to 2026 January 01.		2,673,016	3.30E+14	
a Includes inventory contribution from off-site waste water, Port Granby reverse osmosis concentrate/brine.				

The PG LTWMF engineered containment system contains an inventory of 1,315,059 metric tonnes, and an estimated total activity of 1.60E+14 Bq, as summarized in Table 22. No new waste was placed in the PG LTWMF during the 2025 calendar year.

Table 22: Stored Waste Inventory in the PG LTWMF

Waste Type	Source	Total Estimated Quantity (nearest metric tonnes)	Total Estimated Radioactivity (Bq) [Calculated]	Primary Radionuclides
Radioactive	Historic Waste from PG WMF, Marginally Contaminated Soils and Mix of LLRW and Marginally Contaminated Soils	1,314,446	1.60E+14	Uranium and Uranium Progeny
Radioactive	Process residuals from WWTP (LLRW)	613	1.13E+10	Uranium and Uranium Progeny
Total Waste Stored at the PG LTWMF up to 2026 January 01.		1,315,059	1.60E+14	Uranium and Uranium Progeny

11.1.2 Waste Transfers

Waste transfers from the PHAI sites during the reporting period are provided in Table 23.

Table 23: Waste Transfers from the PHAI sites

Waste Type	Waste Source	Waste Description	Transfer Date (YY/MM/DD)	Weight/Volume	Destination
Hazardous Waste	Port Hope - Chemetron Lagoon	Purged groundwater impacted with trace hydrocarbons	25/05/09	300 L	GFL ENVIRONMENTAL SERVICES INC.
	ON4999480-2321 Brand Road	Waste laboratory chemicals (sodium bisulfite)	25/05/22	615 L	GFL ENVIRONMENTAL SERVICES INC.
	ON4999480-2321 Brand Road	Waste oil (hydraulic oil, compressor oil)	25/05/22	615 L	GFL ENVIRONMENTAL SERVICES INC.
	ON4999480-2321 Brand Road	Waste laboratory chemicals (inhibitor, ROprep)	25/05/22	345 L	GFL ENVIRONMENTAL SERVICES INC.
	ON4876855-PG WWTP, 545 Elliot Road	Solv137 - flocculating agent.	25/06/02	4,000 L	GFL ENVIRONMENTAL SERVICES INC.
	Port Hope - 90 Queen St.	various inorganic materials	25/07/31	1,000 L	AEVITAS INC. (BRANTFORD)
	Port Hope - HDLF	Waste oil	25/10/29	1,652 L	AEVITAS INC. (AYR)
	ON4999480-2321 Brand Road	waste/reject polymer	25/12/19	400 L	GFL ENVIRONMENTAL SERVICES INC.
	ON4999480-2321 Brand Road	Waste oil (hydraulic oil, compressor oil)	25/12/19	400 L	GFL ENVIRONMENTAL SERVICES INC.
Total				9,327 L	

11.2 Decommissioning Plan

The CNSC defines decommissioning as the administrative and technical actions taken to allow the removal of some or all regulatory controls from a facility, location, or site where nuclear substances are managed, used, possessed, or stored.

The PHAI adheres to CNL's Cleanup FSA. Refer to Section 11.2 in the *ACMR for CNL* for details [5]. The PHAI follows the requirements set out in the *Cleanup Function Program Description Document* [49].

The Waste Decommissioning Planning Program aligns with the following:

- CNSC REGDOC-2.11.2, *Decommissioning* [50].
- CSA N294, *Decommissioning of Facilities Containing Nuclear Substance* [51].

In accordance with the *PHAI LCH* [3], CNSC staff were notified [52] of the revision to the *Port Granby Project - Preliminary Decommissioning Plan (PG PDP)* [53] implemented during the reporting period. For a list of decommissioning program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5].

11.2.1 Preliminary Decommissioning Planning

Published preliminary decommissioning plans for the PHAI are listed in Table 24.

Table 24: Summary of Preliminary Decommissioning Plans

Location	PDP Current Revision	Document Name and Number	Submission / Acceptance Date (if applicable)	Status
PGP	Revision 0.2	<i>Port Granby Project – Preliminary Decommissioning Plan</i> [53]	2025 August	Submitted - 2025
PHP	Revision 0.1	<i>Port Hope Project - Preliminary Decommissioning Plan</i> [54]	2025 June	Submitted – 2024 Accepted - 2025

12 Security

The Security SCA covers the programs required to implement and support the security requirements stipulated in the regulations, in the *PHAI Licence* [2], in orders, or in expectations for the facility or activity, as applicable.

12.1 Security Program

The PHAI adheres to CNL's Security FSA. Refer to Section 12 of the *ACMR for CNL* for details [5]. The *Port Hope Area Initiative Security Plan (PHAI Security Plan)* [55] establishes the security arrangements that are required for PHAI project sites. It addresses the responsibilities, linkages with local law enforcement, functions, and elements of the security plan such as training, drills, exercises, and various physical security components. The purpose of the *PHAI Security Plan* [55] is to ensure the physical protection of the PHAI assets and safeguarding of the public and personnel. The *PHAI Security Plan* [55] is based on applicable legislation, regulations, and the *PHAI Licence* [2] and is consistent with CNL's corporate security policies and programs.

Contractors conducting work as part of the PHAI projects submit security plans to CNL for review and approval to confirm compliance with the *PHAI Security Plan* [55]. Contractor compliance with project-specific security plans is examined as part of CNL's Compliance Program (Section 1.5).

There were no revisions to PHAI Security Program documents submitted to CNSC staff during the reporting period. For a list of Security Program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5].

12.1.1 Security Events

In 2025, there was one (1) security event that affected the PHAI which was reported to CNSC staff:

- On June 18th, 2025, on the Highland Drive Landfill site, a member of the public drove on-site and entered a zone 2 area with their vehicle. The driver continued until they reached the zone 2 loading area where they were stopped by on-site staff. The driver was escorted to the contamination control tent where a thorough radiological assessment took place, and no contamination was found on the vehicle. The members of the public remained in the vehicle with windows fully closed. The vehicle was escorted offsite.

Refer to Section 3.2 for a summary of all reportable events.

13 Safeguards and Non-Proliferation

The Safeguards and Non-Proliferation SCA covers the programs and activities required for the successful implementation of the obligations arising from the Canada and IAEA safeguards agreements as well as all other measures arising from the *Treaty on the Non-Proliferation of Nuclear Weapons* [56].

The PHAI's Safeguards Program aligns with CNSC REGDOC-2.13.1, *Safeguards and Nuclear Material Accountancy* [57].

13.1 Safeguards Program

The PHAI adheres to CNL's Nuclear Materials and Safeguards Management FSA. Refer to Section 13 of the *ACMR for CNL* for details [5].

There are no Safeguards Program documents specific to the PHAI. For a list of Safeguards Program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5].

In the reporting period, there was one internal quality audit that resulted in one (1) Non-Conformance and two (2) Opportunities for Improvement as detailed in Section 1.2.1.2.

In the reporting period, there was one (1) event related to the Safeguards Program reported to the CNSC. The PH LTWMF Portal Monitor had stopped communicating with the IAEA. The interruption of the operation of safeguarded equipment is potentially considered as a loss of Continuity of Knowledge of nuclear materials. The VPN modem within the IAEA cabinet was found to be malfunctioning. The PH LTWMF halted the receipt of safeguarded materials until it was confirmed by the IAEA that there was no loss of Continuity of Knowledge.

Refer to Section 3.2 for a summary of all reportable events.

13.1.1 International Atomic Energy Agency Activities

The IAEA conducted various types of inspections as part of the safeguards approach for CNL, including, but not limited to, IAEA safeguards seals changes, human surveillance, implementation and/or maintenance of IAEA safeguards monitoring equipment, and technical visits. A list of IAEA inspections conducted at the PHAI can be found in Section 1.2.2.

14 Packaging and Transport

The Packaging and Transport SCA includes programs that cover the safe packaging and transport of nuclear substances to and from the licensed facility.

14.1 Packaging and Transport Program

The PHAI adheres to CNL's Transportation of Dangerous Goods (TDG) FSA, which includes the requirements of the Packaging and Transport SCA. Refer to Section 14 of the *ACMR for CNL* for details [5].

The *Port Hope Area Initiative Transportation of Dangerous Goods Plan (PHAI TDG Plan)* [58] applies to any activities involving TDG to, or from CNL sites. The TDG Program provides an operational framework for the safe off-site transport of dangerous goods by conforming to all applicable laws and regulations, as well as CNL policies and procedures. Contractors and carriers conducting work for the PHAI projects submit site-specific TDG plans for CNL's review and approval to confirm compliance with the *PHAI TDG Plan* [58] and that carriers of nuclear substances have the required RP Plan for the transportation of nuclear substances.

In accordance with the *PHAI LCH* [3], CNSC staff were notified [59] of the revision to the *PHAI TDG Plan* [58], implemented in the reporting period. For a list of Packaging and Transport Program document notifications applicable to multiple CNL licences, refer to Section 1 of the *ACMR for CNL* [5].

There was one CNSC Inspection of the Packaging and Transport Program to assess CNL against the requirements of the NSCA, its associated Regulations, and the conditions of the *PHAI Licence* [2] and associated *PHAI LCH* [3]. There were three (3) NNCs identified, and one recommendation was provided. All the actions to address the NNCs for this inspection were completed and closed. Additional details are provided in Section 1.2.2.

14.1.1 Shipments

During the reporting period, shipments of dangerous goods were conducted from the PHAI sites to off-site facilities, and shipments of dangerous goods were received from off-site vendors (e.g., consumable chemicals, diesel fuel, and propane).

Ongoing oversight (Section 1.5) of contractors is performed to ensure adherence to the project specific work plan. Recommended incremental improvements to the means and methods to meet the TDG requirements are provided when deemed necessary.

In the reporting period, there were two (2) events related to the TDG Program reported to the CNSC. Both the events are related to minor traffic incidents involving empty dump trucks returning from the PH LTWMF. Refer to Section 3.2 for a summary of all reportable events.

14.1.2 Annual Report of Radiation Detections in Packaging and Transport

There were no shipments at the PHAI in 2025 that met the annual reporting criteria outlined in REGDOC-3.1.3, Section 4.4 [4] and Paragraph 3 of the *Packaging and Transport of Nuclear Substances Regulations*, 2015 [60].

15 Other Matters of Regulatory Interest

15.1 Public Information Program

The primary goal of the Public Information Program, as it relates to the licensed activities, is to ensure that information related to the health, safety, and security of persons and the environment, and other issues associated with the lifecycle of nuclear facilities are effectively communicated to the public. As a component, where the public has indicated an interest in knowing, the program shall include a commitment to and protocol for ongoing, timely communication of information related to the licensed facility during the licence period.

The PHAI adheres to the corporate Public Information Program. Refer to Section 15 of the *ACMR for CNL* for details [5].

The *Port Hope Area Initiative Phase 2 and 3 Public Information Program* [61] sets out the protocol for ongoing, timely and accurate public communication about the activities of the PHAI for both the Phase 2 activities of the PHP and the Phase 3 long-term monitoring and maintenance of the PGP. The document is guided by CNSC REGDOC-3.2.1 *Public Information and Disclosure* [62] and is reviewed and updated as necessary to ensure it continues to provide appropriate direction. The public information program supports CNL's overall mission to lead the cleanup and long-term storage and monitoring of historic LLRW in Port Hope and Port Granby in an environmentally responsible and cost-effective manner.

There were no revisions to the *Port Hope Area Initiative Phase 2 and Phase 3 Public Information Program* [61] in the reporting period.

15.1.1 Outreach and Stakeholder Engagement

The objectives of the PHAI public information program are supported in part by general approaches, products, and activities conducted for each of the PHP and PGP on request, as needed or ongoing, as appropriate.

A list of project-related stakeholder and public engagement activities undertaken in 2025 is included in Table 25.

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Table 25: Public Engagement for PHAI

Date	Location	Activity
2025-01-16	Port Hope	PHAI photos taken by Blake Fitzgerald renowned photographer and author
2025-02-05	Port Hope	Meeting with key stakeholder - Robert Fishlock
2025-02-06	Port Hope	MPH Communications Working Group Meeting
2025-02-07	Port Hope	MPH - What is AI – Public session at Capitol Theatre
2025-02-10	Port Hope	Fleming College PHAI Sites Tour
2025-02-11	Port Hope	Ontario Power Generation (OPG) PHAI Sites Tour
2025-02-12	Port Hope	PHAI Update to PH & District Chamber of Commerce
2025-02-14	Port Hope	Loyalist College Presentation: CNL as a Business Employer
2025-02-18	Port Hope	MPH Council Meeting: PHAI project update
2025-02-22	Port Hope	Port Hope Coldest Night of the Year Walk: CNL Sponsor
2025-02-26	Port Hope	PH Chamber of Commerce Breakfast with the Mayor
2025-03-05	Port Hope	Port Hope Chamber of Commerce Annual General Meeting
2025-03-08	Port Hope	PH Chamber of Commerce International Women's Day 2025 Speaker Event: Accelerate Action - PHAI Sponsor
2025-03-11	Phoenix, AZ	Waste Management Symposium - Presentations on Private Property Remediation
2025-03-14	Port Hope	Loyalist College Radiation Safety Students PHAI Sites Tour
2025-03-21	Port Hope	Trent University PHAI Sites Tour
2025-03-26	Port Hope	Special Interest Group - Dorset St Coalition Tour & Info Session
2025-03-26	Cobourg, ON	Junior Achievement World of Choices event showcasing CNL areas of work
2025-03-27	Port Hope	Stakeholder filming at Highland Drive for personal academic project
2025-04-22	Port Hope	HWP Staff and Contract Partners Earth Day Cleanup
2025-04-27	Port Hope	MPH Sustainability Fair
2025-04-28	Port Hope	Women in Nuclear Durham Executive Tour: PHAI Sites
2025-05-02	Bowmanville, ON	HWP Communications Tour of OPG Darlington Station
2025-05-05	Toronto, ON	Women in Nuclear Booth at the Ontario Skills Student Tradeshow
2025-05-08	Port Hope	Port Hope Chamber of Commerce Meeting: HWP Update
2025-05-29	Port Hope	Lions Park Celebratory Ribbon Cutting Event
2025-06-11	Port Hope	PHAI Public Town Hall
2025-06-18	Port Granby	Port Granby Nature Reserve Site Visit - MPH and Municipality of Clarington
2025-06-27	Port Hope	Port Hope & District Chamber of Commerce Coffee Break with David Piccini
2025-07-15	Port Hope	MPH Council Meeting: Virtual PHAI project update
2025-07-16	Port Hope	NLPC Leadership PHAI Site Visit
2025-07-30	Port Hope	PHAI Project Overview Presentation at Fleming College
2025-07-31	Port Hope	Northumberland First Responders Meeting re: Emergency Preparedness
2025-08-01	Port Hope	Central Lakes Assoc of Realtors Discussion about PHAI activities

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Date	Location	Activity
2025-08-05	Port Hope	Loyalist College Radiation Protection Class: PHAI Presentation & Tour
2025-08-06	Port Hope	NLPC Eric McGoey (Incoming Vice President of Stakeholder Relations) Visit to Port Hope & Sites Tour (Aug 6-7)
2025-08-13	Port Hope	Central Lakes Assoc of Realtors Summer Social - PHAI Booth
2025-08-19	Port Hope	International Atomic Energy Agency Saudi Arabia Delegation Visit and Tour
2025-08-20	Port Hope	International Atomic Energy Agency Saudi Arabia Delegation Visit
2025-08-20	Port Hope	Port Hope & District Chamber of Commerce Member Power Hour - Networking Event
2025-08-24	Collingwood	NWMDER Conference with PHAI Information Booth and presentations (24-28)
2025-09-06	Port Hope	Run Salmon Run: PHAI Sponsorship & Booth
2025-09-07	Port Hope	Municipality staff Tour of Port Hope LTWMF
2025-09-12	Port Hope	Port Hope Fall Fair (PHAI Booth) (Sept 12-14)
2025-09-15	Port Hope	Port Hope Chamber Regular Board Meeting: PHAI Update
2025-09-16	Port Hope	MPH Council Meeting: Virtual PHAI project update
2025-09-18	Port Hope	Environment Canada & CNSC Tour of PH Harbour & LTWMF (PH & PG) - Management & Executives
2025-09-21	Port Hope	CNL Attended Cameco Public Info Session
2025-09-24	Hamilton	McMaster University Science Careers - Pathways to Success Event
2025-10-01	Port Hope	Meeting with MPH Comms Working Group
2025-10-09	Port Hope	Loyalist College PHAI Overview Presentation
2025-10-10	Port Hope	OPG Port Hope Education Centre Grand Opening - PHAI Representatives
2025-10-15	Port Hope	Central Lakes Association of Realtors Professional Development Committee PHAI Presentation & Sites Tour
2025-10-15	Port Hope	PHAI Tour for General Public – 4 participants
2025-10-15	Port Hope	Port Hope Chamber Regular Board Meeting: PHAI Update
2025-10-16	Port Hope	Office of the Auditor General - Meeting and PHAI Sites Tour
2025-11-05	Port Hope	Take Your Kids to Work Day – 7 participants
2025-11-06	Port Hope	Resident Roundtable Focus Group Meeting
2025-11-11	Port Hope	Port Hope Royal Canadian Legion Remembrance Day Service: CNL Sponsor
2025-11-25	Port Hope	The Nook Realty Brokerage PHAI Sites Tour
2025-11-26	Port Hope	Conexus Environment Workshops PHAI Sites Tour
2025-11-26	Port Hope	Port Hope Health Concerns Committee Public Meeting
2025-11-28	Port Hope	Durham Nuclear Health Committee PHAI Presentation
2025-12-01	Port Hope	Loyalist College Industry Day - PHAI Booth
2025-12-10	Port Hope	MPH/PHAI Comms Working Group Meeting
2025-12-11	Port Hope	Port Hope & District Chamber of Commerce PHAI Project Update

GM – General Manager; MP – member of Parliament; CC – Cleanup Criteria; OPG – Ontario Power Generation;
 HSSE – Health, Safety, Security, and Environment.

15.1.2 Public Engagement

Canadian Nuclear Laboratories shares information on the PHP and PGP with the host communities through a variety of approaches.

The PGP crossed a critical threshold by moving into Phase 3 activities in 2022, marking the completion of the environmental remediation of the site and moving into long-term monitoring and management. Phase 3 focuses on the monitoring and maintenance of the PG LTWMF so the need for public engagement and overall public interest has reduced considerably. While ongoing communication still takes place to keep the Port Granby community informed, less public engagement is required moving forward. Canadian Nuclear Laboratories remains available to respond to and communicate regarding any emergency situations and to address any questions or concerns from stakeholders and the public.

The plans to transfer lands surrounding the PG LTWMF to the care of a management group, which includes both the Municipalities of Clarington and Port Hope and others, for use as a nature reserve is still ongoing. This past year, new council members and staff from both the Municipalities of Port Hope and Clarington attended a site visit to view the proposed areas.

15.1.2.1 Canadian Nuclear Laboratories Project Information Office

The Port Hope office is open Monday to Friday 8:30 a.m. to 4:30 p.m. to provide information and respond to inquiries. Telephone access is available outside of business hours, with CNL staff on call for prompt response to calls of an urgent nature or next business day follow-up for non-urgent calls.

The number of unplanned in-person visits to the office are declining. Office visits are usually made by residents/property owners who have a scheduled meeting time to discuss PHAI activities on their property.

15.1.2.2 Online Communications

Through digital media such as website and social media channels (e.g., [PHAI.ca](https://www.phai.ca), Facebook, and Instagram), CNL provides information on the PHP and PGP including emerging issues of public interest regarding PHAI activities, descriptions of current and upcoming work; environmental monitoring reports; project newsletters; opportunities for public participation and information on CNSC licences, public disclosures, the Complaint Resolution Program and the Property Value Protection Program.

15.1.2.3 Social Media

Staff respond to questions or comments posted by members of the public on PHAI social media accounts and monitors dialogue of relevance to the PHAI on other social media accounts. Timely corrections to inaccurate information about the PHAI and responses as appropriate are posted.

In 2025, the PHAI social media plan encouraged public discussion about PHAI activities online. CNL staff proactively and reactively answered questions about PHAI activities based on these discussions. The social media plan also continued to provide opportunities to inform the public and Port Hope residents about project activities and shared updates.

Canadian Nuclear Laboratories Port Hope's online presence continued to drive engagement adding 85 additional followers in 2025. The social media audience for the PHAI is split evenly between women (55%) and men (45%). Followers are primarily located in Port Hope, with Cobourg and the Greater Toronto Area providing the next largest audiences.

15.1.2.4 Website

In 2025, communications materials including fact sheets, newsletters, and the PHAI website itself ([PHAI.ca](https://phai.ca)) continued to be in alignment with the CNL brand.

A "Navigating remediation options with the PHAI" link on the home page of [PHAI.ca](https://phai.ca) directs residents to learn more about the options available for private property cleanup. The website also includes a dedicated page with links to documentation, additional resources, and information on how to participate in the process. CNL regularly revises and updates a full complement of materials including newsletters, presentations, fact sheets, and information videos.

15.1.2.5 Presentations and Site Tours

Presentations and site tours facilitate understanding and appreciation for the complexity and importance of PHAI projects. They also provide information on current and planned project activities and programs. Presentations and tours illustrate the scope of project planning and implementation including environmental protection, compliance with occupational health and safety requirements, and conformance with environmental assessment and licensing obligations and practices. In 2025, tours were particularly useful in demonstrating progress on the PHAI projects, with completed and restored sites like Lions Park and Waterworks West available for viewing.

This outreach helps strengthen connections with science, education, and industry communities; promote and support science, technology, engineering, and math education; and share information with other groups or communities undertaking similar initiatives.

15.1.2.6 Host Community Communications

Canadian Nuclear Laboratories staff liaises regularly with elected officials and staff of the host municipalities. As part of an agreed-upon framework for dialogue to keep municipalities informed of PHAI plans and progress, CNL provides regular project and communications updates to municipal councils, committees, and staff through a variety of media, as well as topical presentations upon request.

Canadian Nuclear Laboratories provided regular updates to the Port Hope community through

quarterly meetings of the Agreement Monitoring Group, regular council presentations, newsletters, advertising, and resident notifications.

In Port Granby, CNL staff regularly met with staff and councillors from the Municipality of Clarington providing updates about the status of the Port Granby Long Term Waste Management Facility and proposed nature reserve. Sampling in a road allowance near the PG LTWMF was completed in 2025 with investigations to continue in 2026. Canadian Nuclear Laboratories is working to transfer certain parcels of land to the Municipality of Clarington in 2026 in preparation for the establishment of a nature reserve. Canadian Nuclear Laboratories provided an annual project update to the Durham Nuclear Health Committee in November. Canadian Nuclear Laboratories staff also provided a site tour of the lands proposed for the Port Granby nature reserve to representatives from the Municipalities of Clarington and Port Hope in June 2025.

15.1.2.7 Community Notifications

Community notifications provide information about near-term PHAI-related activity and/or notable changes to schedule or nature of work to residents and businesses and others located near planned work. They may also serve as advance notification of longer-term project plans or disclosure of unplanned project events.

In 2025, CNL issued several notifications about upcoming work and short-term road closures. Each is posted on [PHAI.ca](https://www.phai.ca) and circulated on social media. Canadian Nuclear Laboratories also produced and hand-delivered notices to neighbours of the project sites.

As a direct result of the closure of the local newspaper in 2024, CNL continued its efforts to hand deliver notifications in 2025. This demonstrates how the PHAI communications efforts adapt as needed.

15.1.2.8 Special Events

Participation in external events provides the broader public with information about PHAI activities and health and safety measures in place to protect people and the environment. It is also an opportunity for CNL staff to act as project ambassadors and broaden awareness and understanding of the projects.

In 2025, CNL once again participated in the annual Run, Salmon, Run Festival and returned to the Port Hope Fall Fair. New this year, CNL participated in the MPH's first ever Sustainability Fair hosted in April 2025. CNL also hosted a grand re-opening event, in conjunction with the MPH, to recognize the restoration of Lions Park from an industrial waste site to a public recreation and community space.

15.1.2.9 Public Information Sessions

Canadian Nuclear Laboratories holds public information sessions to share updates and details on PHAI work and related monitoring, mitigation, and health and safety measures in place to

protect people and the environment.

These sessions, open to anyone who wishes to participate, allow CNL to provide updates on planned or changed project activity and programs, discuss neighborhood-specific issues related to PHAI work, and receive feedback from public. Sessions include opportunity for two-way dialogue through question-and-answer periods with CNL and contractors' subject matter experts and are open to members of the public, stakeholders, and the media.

On June 11, 2025, CNL, hosted a community town hall meeting, about the PHAI at the Port Hope High School. The event included a brief presentation followed by an open question and answer session with PHAI management, giving residents a direct opportunity to raise issues, seek clarification, and learn more about ongoing remediation activities across the community. Attendees were encouraged to submit questions in advance through the Port Hope & District Chamber of Commerce or directly to CNL staff.

This town hall information session was significant because it drew hundreds of attendees and provided a transparent, accessible forum for discussing PHAI activities with the people being directly impacted by the project. With PHAI activities actively taking place on private and municipal properties, the session served as an important touchpoint for sharing updates, addressing concerns, and reinforcing the project's commitment to openness and community engagement. The town hall helped build trust, support informed participation, and ensure residents know how to connect with CNL staff to get information about their properties or PHAI work.

Feedback at the town hall indicated Port Hope residents were looking for improved communication about the work taking place in their neighborhoods and options available for residents waiting for property remediation. As a direct result of this feedback, a focus group was created to help establish a Resident Roundtable. An outline of options available for property remediation was added as a feature to the PHAI website in addition to answers for all the resident questions submitted prior to the Town Hall.

15.1.2.10 Resident Information Sessions

Prior to the start of work at a public project site, a public meeting is held to provide an overview of the process, timelines, and any anticipated mitigation measures to be implemented. CNL and contractor staff are available to answer questions and address any concerns. These meetings provide an opportunity for residents to get specific and detailed information about planned work and possible impacts.

There were several touch points in 2025 for the neighbouring residents of the Highland Drive area.

15.1.2.11 Contractor Communications Training and Collaboration

Canadian Nuclear Laboratories is the lead for all communications with property owners and the public. Canadian Nuclear Laboratories communications staff work closely with prime

contractors at all project sites, including private properties, to clearly define expectations, maintain consistency, align departments, and ensure adherence to approved CNL communication processes.

In 2025, as part of the General Manager's strategy regarding CNL's contracting partners working on the PHAI, there was more connection between CNL contractors and the Port Hope community. The Communications Team with the PHAI worked closely with contractor representatives on a community event (Holiday Food Drive), helping CNL contractors establish an identity with residents. Additionally, in November 2025, specialized stakeholder de-escalation training was provided for CNL and contractor field staff.

15.1.2.12 Dedicated Signage

Port Hope Area Initiative trucks, equipment, and project sites are marked with CNL signage to provide information on work being conducted, detailed health and safety information and requirements, and clear direction on location of LTWMFs to facilitate project traffic and first responder access. All PHAI signage includes contact information for questions or concerns.

15.1.2.13 Internal Communications

Internal communications are shared regularly to ensure that CNL employees are fully apprised of CNL business and PHAI project activities on an ongoing basis.

15.1.2.14 Port Hope Business Community Liaison

Canadian Nuclear Laboratories is a member of the Port Hope and District Chamber of Commerce and provides a monthly update on project progress, communications, and PHP-related economic opportunities to the Board of Directors. Communications staff works directly with Chamber of Commerce staff to develop additional opportunities for members including PHP site tours and events targeted at current and potential project contractors. In 2025 there was a change in the leadership staff at the Chamber of Commerce with longtime CEO leaving for other opportunities.

To provide access to CNL supply chain opportunities, the PHAI website includes links to a contractor portal, supply chain registration, and vendor portal to connect potential or current suppliers with information on procurement opportunities for goods, services, equipment, decommissioning, and construction.

Information on specific events including the CNL industry day and career fair are circulated to the Chamber of Commerce and any individuals or groups who have expressed interest in career or business opportunities and CNL contracting processes.

In addition, CNL provided focused support to the Central Lakes Association of Realtors (CLAR) in 2025. Canadian Nuclear Laboratories provided multiple presentations on the PHAI for the association's members and local brokerages. In August 2025 CNL hosted a booth at the CLAR summer social event and offered realtor focused tours in October and November 2025 of PHAI

project sites.

15.1.2.15 Health and Emergency Services

Canadian Nuclear Laboratories plans are in place to ensure internal and external events are properly managed and risks to people and the environment are minimized. In addition to documentation and plans maintained by CNL, communications and regular interface are clearly established between and aligned among CNL, the municipalities, the provinces, and the federal government.

In July 2025, CNL communications staff facilitated a meeting between PHAI Health, Safety, Security and Emergency Preparedness teams with representatives of local health and emergency services agencies to provide an update on project activities and respond to questions and/or concerns around the project.

Canadian Nuclear Laboratories had ongoing communication with Haliburton Kawartha Northumberland Peterborough Health Unit which changed their name to Lakeland Public Health in 2025. Canadian Nuclear Laboratories hosted a meeting with Lakeland Public Health staff in November 2025 to provide a project update on the PHAI.

Refer to Section 15 of the *ACMR for CNL* for details [5].

15.1.2.16 Newsletters

Port Hope Area Initiative project newsletters update the community on the status of the projects, upcoming work, and changes to planned work or programs. Newsletters are distributed to every household in the respective municipality and to an extensive list of federal, provincial, regional, and municipal stakeholders; newsletters are also available online at [PHAI.ca](https://phai.ca).

The PHP newsletter was distributed in December 2025 by mail to approximately 8,000 homes, businesses, and farms in the MPH and by email to approximately 3000 contacts and made available online at [PHAI.ca](https://phai.ca). The fall 2025 newsletter provided an overview of operational changes and confirmed the majority of historic LLRW in Port Hope has been safely placed into long-term storage.

15.1.2.17 Media Relations

When required, CNL briefs the media and informs the community and broader audiences about imminent project activities, project achievements, and changes to schedule, nature of work, or PHAI programs while reinforcing CNL as primary source of accurate, timely information.

Canadian Nuclear Laboratories monitors the amount and nature of media coverage related to the PHAI generally or to any specific project activity, the type of media involved (e.g., television, print, social media) and the support or concern that has been expressed with relation to the project or activity.

Local, provincial, national, international, and social media coverage of issues related to the PHAI is monitored and analyzed, enabling CNL to understand trends, respond to media coverage when necessary, and identify effective ways to work with the media.

A list of media coverage of the PHAI is included in Table 26.

Table 26: Media Coverage

Date	Article	Title of Publication
2025-01-12	Atomic Reaction PHAI Feature	Facebook/CBC Docs
2025-06-12	Chemetron Lagoon Parking Lot and Waterfront Trail Partial Opening in Port Hope Chemetron Lagoon Parking Lot and Waterfront Trail Partial Opening in Port Hope - Today's Northumberland - Your Source For What's Happening Locally and Beyond	Today's Northumberland
2025-07-04	New Leaders take charge of cleaning up Canada's most contaminated nuclear sites. Can they reduce federal liabilities? New leaders take charge of cleaning up Canada's most contaminated nuclear sites. Can they reduce federal liabilities? - The Globe and Mail	Globe and Mail
2025-07-09	Maintenance dredging begins in Canada's Port Hope outer harbour	DredgeWire
2025-07-14	Chemetron Lagoon trail, parking partially reopen in Port Hope as restoration progresses Chemetron Lagoon trail, parking partially reopen in Port Hope as restoration progresses 93.3 myFM	Northumberland Daily
2025-10-03	Port Hope celebrates completion of major phase of West Beach remediation Port Hope Celebrates Completion of Major Phase of West Beach Remediation - Today's Northumberland - Your Source For What's Happening Locally and Beyond	Today's Northumberland
2025-10-05	Port Hope marks milestone with completion of major phase at West Beach Port Hope marks milestone with completion of major phase at West Beach 93.3 myFM	Northumberland Daily
2025-10-06	Brownie Awards 2025 Finalists (Chemetron nominee) Brownie Awards 2025: Jury reveals finalists from across the country – The Environment Journal	Environment Journal
2025-10-14	Design work starts for Cavan Street, Highland Drive reconstruction in Port Hope Design work starts for Cavan Street, Highland Drive reconstruction in Port Hope 93.3 myFM	Northumberland Daily

Date	Article	Title of Publication
2025-10-23	Port Hope Municipality celebrates completion of major phase of remediation Port Hope Municipality celebrates completion of major phase of remediation – The Environment Journal	The Environment Journal
2025-10-27	Port Hope celebrates completion of major phase of West Beach remediation Port Hope celebrates completion of major phase of West Beach remediation – ReNew Canada	ReNew Canada
2025-10-29	Port Hope marks major milestone as West Beach reopens after remediation Port Hope marks major milestone as West Beach reopens after remediation - Ontario Construction News	Ontario Construction News
2025-12-03	CNL's 2025 Sustainability Report Highlights Major Progress on Port Hope CNL's 2025 Sustainability Report Highlights Major Progress on Port Hope Area Initiative - Today's Northumberland - Your Source For What's Happening Locally and Beyond	Today's Northumberland
2025-12-08	CNL's sustainability strategy centres on Port Hope Area Initiative cleanup, national environmental goals CNL's sustainability strategy centres on Port Hope Area Initiative cleanup, national environmental goals 93.3 myFM	Northumberland Daily
2025-12-31	Port Hope residents invited to public meeting as Ontario government considers building world's largest nuclear station in Wesleyville	Kawartha Now

During 2025, CNL did not have any formal media releases.

15.1.3 Public Disclosures

Canadian Nuclear Laboratories is committed to providing open and transparent public disclosure, guided by the *PHAI Phase 2 and Phase 3 Public Information Program* [61], in alignment with CNSC REGDOC-3.2.1 Public Information and Disclosure [62] about unplanned project activities and non-routine events. All public disclosures were posted on PHAI.ca. A list of the fourteen (14) public disclosures for the reporting period is included in Table 27.

Table 27: Public Disclosures

Date	Subject
2025-01-20	Worker slipped while working on private property
2025-03-05	Propane tank leak found at Centre Pier
2025-03-18	Contractor owned truck in minor traffic accident
2025-04-08	Gas vent repair completed on private property
2025-04-08	Worker became ill on worksite (pre-existing condition)
2025-04-25	Airborne dust was visible during cement delivery
2025-05-30	Offsite storm water release at LTWMF
2025-07-18	Smoke identified on LTWMF site
2025-07-29	Gas line leak on private property
2025-08-06	Contractor owned truck in minor traffic accident
2025-08-15	Highland Drive South Ravine water left site during cleaning work
2025-08-18	Received a letter from CNSC regarding the placement of uncharacterized radioactive wastes
2025-09-18	Gas line leak on private property
2025-11-25	Contractor owned truck transporting LLRW in single vehicle accident

15.1.4 Monitoring Public Opinion

Monitoring of public opinion is ongoing to gauge understanding, perceptions, concerns, and opinions about the PHAI and project-related impacts as well as stakeholder support for and awareness of the PHAI. Canadian Nuclear Laboratories staff responds promptly and effectively to media coverage and social media posts when necessary. Through 2025, CNL communications staff answered questions about the impact of PHAI work on tree loss, the application of special circumstances, and timing of cleanup on privately owned properties. There was particular interest in CNL's response to issues raised during the Town Hall hosted in June 2025.

A focus group was held in November 2025, this meeting with Port Hope residents played a central role in shaping the design and purpose of the PHAI Resident Roundtable that is being launched in 2026. During this session, CNL gathered direct community feedback—some of it originally raised at the June Town Hall—highlighting residents' desire for clearer, more consistent, and more accessible communication about ongoing PHAI activities. This feedback became the foundation for the Roundtable's development.

Focus Group participants provided detailed suggestions that directly influenced the Resident Roundtable's structure and objectives. They emphasized the need for communication methods beyond social media, recommending mailbox notices, neighbourhood specific updates, and handout cards for residents undergoing remediation. They also stressed the importance of ensuring homeowners clearly understood their options within the voluntary PHAI process. These insights shaped the Roundtable's commitment to providing practical, shareable information for the community.

Residents also highlighted the importance of representation and continuity. Their recommendations—to include both new and previously remediated homeowners, incorporate younger and newly arrived residents, and stagger membership terms (one- and two-year options)—helped define how the Roundtable would be assembled and sustained. These focus group contributions guided CNL in creating a forum designed for long term dialogue, balanced perspectives, and meaningful communications and engagement input.

A Public Attitude Survey for residents in Port Hope is scheduled to be completed next in 2026. This survey will focus on the PHP.

15.1.5 Education/Science and Technology Communities

Presentations, site tours, and program-specific information and demonstrations are provided on request to students at the elementary, high school, college, and university level. Canadian Nuclear Laboratories also participates on program advisory committees to provide industry perspective on the development of new programs and courses.

National and international education institutions, industry, and professional groups also participate in PHAI presentations and site tours and CNL continues to develop outreach activities related to science, technology, engineering, and math education.

In 2025, the CNL magazine for elementary students, Kids CONTACT, continued distribution to the Port Hope community.

In 2025, CNL staff participated in an education session for grade 8 students highlighting how their education played an important part in their current careers with CNL.

At the college level, CNL staff participates in the advisory committee for the Fleming College Waste Management program to provide industry insight into program planning. In December 2025, RP staff attended the Loyalist College Industry Day showcasing potential career pathways for graduates of the program. A list of school events for the PHAI is included in Table 28.

Table 28: School Tours/Presentations

Date	Location	School
2025-02-10	Port Hope – PHAI Sites Tour	Fleming College
2025-02-14	Port Hope – Presentation	Loyalist College
2025-03-14	Port Hope – PHAI sites tour	Loyalist College
2025-03-21	Port Hope – PHAI sites tour	Trent University
2025-03-26	Cobourg – student career event	Junior Achievement – Grade 8
2025-03-30	Port Hope – Presentation	Fleming College
2025-08-05	Port Hope – Presentation & Tour	Loyalist College
2025-09-24	Hamilton – student career event	McMaster University
2025-10-09	Port Hope – Presentation & Tour	Loyalist College

In the science and technology community, CNL participated in environmental remediation industry events both nationally and internationally, providing a PHAI overview and sites tour for representatives of the IAEA - Saudi Arabia Delegation, Ontario Power Generation, and Women in Nuclear Durham executive members.

Canadian Nuclear Laboratories staff also provided presentations and tours for Environment Canada and the CNSC in September 2025. A tour of the PHAI sites was also provided for the Office of the Auditor General in October.

15.1.6 Ongoing Projects

Specific engagement programs and communications initiatives may be implemented with targeted engagement to inform, educate, and discuss specific topics with the public, property owners, and stakeholders.

A dedicated strategy is developed, and a variety of approaches may be used to provide information, and encourage and facilitate feedback, including distribution of information, advertising, information sessions, focus groups, and feedback forms.

Of particular importance is the PGP, which provides a great example to interested parties of a completed environmental project where an engineered containment system has been capped and closed.

The Chemetron Lagoon project was a finalist for a prestigious 2025 Brownie Award in the sustainable remediation category. This recognition celebrates CNL's ongoing commitment to sustainability as part of the PHAI projects. The Brownie Awards is self-described as recognizing the builders, innovators, and visionaries who are dedicated to the rehabilitation of brownfield sites that were once contaminated, under-utilized, and undeveloped into productive residential and commercial projects that contribute to the growth of healthy communities across Canada. The Chemetron Lagoon was selected as a finalist for its groundbreaking approach to cleaning up this previously contaminated industrial site and demonstratable outcome for the site as a public park.

15.1.6.1 Port Hope Private Property Communications

As part of the PHAI, CNL is conducting a Property Radiological Survey on approximately 6,000 properties in urban Port Hope and a small number in rural Port Hope to confirm which properties require cleanup of historic waste.

In accordance with the PHAI *Communications Plan Small-Scale Sites* [63], CNL staff continued to implement several approaches to ensure ongoing communications and outreach with property owners through all stages of the survey and, for those properties with waste, throughout the remediation and restoration of the property.

In 2025, the communications strategy plan focused on sharing information about the available options to private property owners for their property cleanup and developing processes to

protect trees. The CNL Communications team was proactive in reaching out to the community and specific residents to offer information and confirm their ongoing touchpoint for PHAI updates.

In response to feedback about communications on the cleanup of private properties, CNL has prioritized open engagement with residents and stakeholders, hosting a public town hall information session and leading to the development of a Resident Roundtable, which allows direct feedback on communications products. Private property communications have focused on offering more choice to residents about remediation approaches and focusing on minimizing disruption for neighbourhoods instead of accelerating timelines.

15.1.6.2 Individual Property Owner Communications

All property owners included in the survey receive a consent and scheduling package outlining the process and requesting written confirmation of their participation. Once a signed consent is received, individual phone calls are made to schedule survey appointments.

For properties identified as having waste, CNL contacts the owner to provide test results and a design overview booklet: an overview of next steps and what to expect during the process. Design meetings are held with owners to review the design package for the property and make any changes; details are finalized, and the Remediation and Restoration Agreement is signed.

Before work begins on private properties, a property owner information session is held to review upcoming work and details on what owners and adjacent neighbours can expect throughout the remediation and restoration process.

From the start of testing through to restoration and closeout of each property, communications staff remain available by phone, email, and in person to help property owners navigate the process and to respond to any inquiries and concerns.

In 2025 CNL staff had 12,927 interactions with property owners. A summary of private property owner interactions is provided in Table 29.

Table 29: Private Property Owner Interactions for 2025

Type of Interaction	Number
Phone Calls	2801
Written Communications	8329
Property Owner Meetings	760
Site Visits	1037

15.1.6.3 Private Property Information Sessions

In advance of work starting on private properties, a virtual meeting is held with the owner to review the overall work plan. CNL staff and the assigned contractor outline plans for each property including site preparations, mitigation plans, and day-to-day coordination including parking, mail delivery, garbage pickup, etc.

15.1.6.4 Communications Field Staff

Communications Field Liaison Officers regularly attend property sites to address emerging issues. Their primary role is to mitigate any escalating situations resulting from property owner concerns with project activities.

The field staff ensures delivery of consistent messaging when explaining property plans, changes and delays and carefully record and address any concerns. Where required, the officers will identify and support the implementation of accommodation measures for those with extenuating circumstances.

15.1.6.5 Decline-to-Participate Letters

In an ongoing effort to encourage participation in the property survey, CNL undertakes a comprehensive process to connect with Port Hope property owners who have not provided consent to participate in or continue the Property Radiological Survey. The aim is to confirm whether they wish to be included in the survey. If no response is received after multiple attempts to engage a property owner, CNL issues a decline to participate letter indicating the recipient has 30 days to confirm whether they wish to participate in or decline the PHAI cleanup.

15.1.6.6 Port Hope Property Information Access

At the written request of a property owner, CNL provides a radiological status letter confirming any available results of any radiological investigation and remediation activities on the property to date.

When a property is listed for sale and the owner provides the radiological status letter to prospective buyers, CNL staff is available (with written permission from the owner) to speak with prospective buyers and answer questions related to the information in the letter.

15.1.6.7 Application to Amend PHAI Licence: Change to PHAI Cleanup Criteria

In 2025 CNL continued to inform internal and external audiences about the status of the proposed licence amendment for the arsenic cleanup criterion as part of regular updates on PHAI activities. Canadian Nuclear Laboratories also continued to collect public feedback. Discussion and feedback were recorded and applied, where applicable, to further refine messaging, address common questions, and maintain open dialogue about support and concerns throughout the engagement process. See Section 15.3 for more details.

15.2 Indigenous Relations

In alignment with the Truth and Reconciliation Commission *Call to Action #92 Business and Reconciliation* [64], CNL prioritizes the recognition of Indigenous rights and interests through ongoing learning about their values, interests and history. CNL continues to grow an Indigenous Relations program with specialized staff to support both internal and external engagement. All employees are required to complete a mandatory computer-based training module to educate staff about Indigenous history and rights at the international, national and local/Treaty level and additional learning opportunities are provided on several platforms on a regular basis.

Ongoing engagement includes regular meetings and project site tours with Indigenous communities and organizations and the opportunity for review and feedback on project information, materials and engagement planning to ensure their worldviews and concerns are shared, understood and integrated into CNL project planning and activities.

15.2.1 Identified Indigenous Communities and Organizations

From the start of Phase 1 planning of the PHAI projects, the Mississauga communities of the Williams Treaties First Nations have been involved in the PHAI, participating in the Environmental Assessment consultation process in the early 2000s which included more than 40 engagements with Indigenous communities and organizations over the course of eight years.

Once the PHAI moved into Phase 2 in 2012, the Mississauga communities requested and began receiving ongoing project updates. CNL has also shared PHAI updates with other communities and organizations potentially having interest in the project based on their proximity and interest in other projects in the area local to PHAI activities.

Engagement continues to evolve both in the frequency and level of participant involvement.

A list of communities and organizations is provided in Table 30.

Table 30: Indigenous Communities and Organizations

Indigenous Communities (by Representative Organization) and/or Organizations	Identification Rationale
Alderville First Nation	Community with Aboriginal and Treaty Rights
Curve Lake First Nation	Community with Aboriginal and Treaty Rights
Hiawatha First Nation	Community with Aboriginal and Treaty Rights
Mississaugas of Scugog Island First Nation	Community with Aboriginal and Treaty Rights
Beausoleil First Nation	Community with Aboriginal and Treaty Rights
Chippewas of Georgina Island First Nation	Community with Aboriginal and Treaty Rights
Chippewas of Rama First Nation	Community with Aboriginal and Treaty Rights
Mohawks of the Bay of Quinte	Community with interests

Anishinabek Nation	Organization with interests
Métis Nation of Ontario	Organization with interests

Detailed information is provided below for each Indigenous community and organization that engages with CNL on the PHAI. Background information on each community, noted in italics, has been adapted from each community's website and other public sources.

15.2.1.1 Williams Treaties First Nations

The Williams Treaties First Nations are the Chippewas of Beausoleil, Georgina Island and Rama, and the Mississaugas of Alderville, Curve Lake, Hiawatha, and Scugog Island. These seven First Nations are signatories to various 18th and 19th century Treaties that covered lands in different parts of south-central Ontario. In the autumn of 1923, the Chippewas and Mississaugas had their claim validated by the Williams Commission, to a large tract of land between Lake Huron and the Ottawa River, bounded on the north by the Mattawa River-Lake Nipissing and French Line and on the south by earlier concluded treaties. In November of 1923 this validated claim was expedited in two treaties, the Chippewa and Mississauga versions which are in essence the same Treaty, however, it represented each's respective claim over the same described area. Included in the treaties, without a mandate by the Commission, were additional lands covering the old Gunshot Treaty lands of the 1780s and lands below Lake Simcoe known as the "Western Hunting Grounds."

In 2025 group meetings between the CNL Indigenous Relations and Environmental Remediation Management (ERM) staff and the Williams Treaties First Nations continued on a quarterly schedule at the Nations' request. Meetings were held in January, April, July and October and included community updates, information sharing and updates on the PHAI and other CNL project activities.

Specific discussion topics for each meeting were determined in advance based on interests of the Nations and included an update on the AECL Government-Owned/Contractor-Operated procurement process, the Ottawa River Fish Study; the judicial review related to the Near Surface Disposal Facility application; proposed changes to the PHAI Cleanup Criteria; and an overview of property owner options for the remediation of the Port Hope Small-Scale Sites.

Canadian Nuclear Laboratories projects taking place on Williams Treaties lands were also discussed including both the proposed Near Surface Disposal Facility at the Chalk River Laboratories site and the decommissioning of the Nuclear Power Demonstration facility.

Throughout the year, CNL circulates draft documents and plans to the Williams Treaties First Nations inviting their input. In 2025, these included the *Highland Drive South Ravine Planting Plan*, the *Port Hope Project Long-Term Waste Management Facility Hydroseeding Plan* and *Tree Screen and Phragmites Control Plan*. Canadian Nuclear Laboratories staff and contractors disposition comments and apply feedback before documents are finalized.

In addition to the quarterly group meetings, each of the Mississauga Nations continued with quarterly one-on-one meetings with CNL Indigenous Relations and ERM staff. A number of individual activities and meetings took place with each Nation based on CNL initiatives and Nation-specific requests and interests. Details for each Nation are outlined in each section below.

Alderville First Nation

[Alderville First Nation](#) has been home to the Mississauga Anishinabeg of the Ojibway Nation since the mid-1830s. Before that time the people lived in their traditional lands around Bay of Quinte, but with the influx of settlement after the American Revolution their existence found itself under increased pressure. The British having lost the American colonies after 1783, were forced to relocate the soldiers and civilians that had been loyal to the King during the conflict. For this reason, the Bay of Quinte became one area of treaty negotiation for the purpose of settlement for those who became known as the United Empire Loyalists. The Mississauga then, were directly involved in early "land surrenders" along the upper St. Lawrence River and the Bay, allowing this settlement to occur. [65]

In 2025, Alderville expressed interest in establishing a Contribution Agreement with CNL; Indigenous Relations worked closely with the Nation to support the process and in late 2025, the Nation submitted a draft agreement for CNL staff and legal review. The expectation is that the agreement will be finalized in early 2026.

Alderville First Nation participated in the quarterly Williams Treaties First Nations meetings in 2025, receiving information, newsletters, project updates and public disclosures. At the request of the Nation, CNL established quarterly meetings at the start of the year for mutual updates/information sharing. Each meeting focused on a specific topic including Port Hope Harbour work, completion schedule and opportunity to observe upcoming de-fishing activities; and updates related to the progress of the Waterworks West restoration project.

In July 2025 CNL hosted representatives from both Alderville First Nation and Mississaugas of Scugog Island First Nation, CNL Indigenous Relations and Environmental staff to observe the de-fishing of the Ganaraska River in preparation for the work to repair damaged river walls in the vicinity. The proximity of the de-fishing boat to the bank of river allowed participants to clearly observe the activities and ask questions of staff carrying out the work; CNL received positive feedback on the experience from participating Nations and later circulated an overview report of the fish captured.

Canadian Nuclear Laboratories was pleased to sponsor the Alderville First Nation Pow Wow in July 2025.

In the fall, Alderville expressed interest in participating in the archeology investigations in the vicinity of a small Port Hope cemetery. Canadian Nuclear Laboratories staff worked closely with their representative to develop a plan for involvement when the work takes place, likely spring 2026.

In October, CNL hosted a visit from council and staff from Tthebatthie Denesųliné Nation (one of the communities CNL works with to carry out the Northern Transportation Route Initiative in Alberta and the Northwest Territories). At the invitation of CNL's Senior Indigenous Engagement Advisor (a member of Alderville First Nation), the visiting group and CNL staff enjoyed an afternoon at the Alderville Black Oak Savanna including a tour of the facilities and opportunity for in depth learning about the planting program.

In December 2025, CNL issued an invitation to the Williams Treaties First Nations to join a Working Group dedicated to developing the *PHAI Invasive Species Management Plan*. Alderville First Nation is participating and meets with the group regularly to establish a species list, management approaches and ensure that Indigenous knowledge and practices are properly represented in the final plan.

Beausoleil First Nation

[Beausoleil First Nation](#) (*G'Chimnissing*) is an Ojibwe First Nation and band government located in Simcoe County, Ontario, Canada. The main settlement is on Christian Island 30, while other reserves consist of Beckwith and Hope Islands, and Cedar Point 30A, with Chippewa Island reserve being shared with Chippewas of Georgina Island and Rama. The community and government offices are situated on Christian Island. [66]

As a member of the Williams Treaties First Nations, Beausoleil First Nation has been identified as potentially having interest in the PHAI based on their proximity and interest in other projects in the area local to PHAI undertakings.

In 2025, the Chippewas continued to receive invitations and agendas for the quarterly meetings with the Williams Treaties First Nations and attended two of these meetings.

Canadian Nuclear Laboratories provided information, newsletters, project updates and public disclosures, opportunities for review and comment on draft plans and reports as well as information and an invitation to participate in the PHAI Invasive Species Management Plan Working Group.

Chippewas of Rama First Nation

The [Chippewas of Rama First Nation](#) is located approximately one and a half hours north of Toronto, on 2,500 acres of interspersed land nestled in "Ontario's Lake Country", on the eastern side of Lake Couchiching. The Ojibwe peoples are part of the Three Fires Confederacy along with the Odawa and Pottawatomi Nations. [67]

As a member of the Williams Treaties First Nations, the Chippewas of Rama First Nation have been identified as potentially having interest in the PHAI. Over the years, CNL has engaged in two-way dialogue and mutual information sharing.

In 2025, the Chippewas continued to receive invitations and agendas for the quarterly meetings with the Williams Treaties First Nations and attended the April meeting. CNL provided

information, newsletters, project updates and public disclosures, opportunities for review and comment on draft plans and reports as well as information and an invitation to participate in the PHAI Invasive Species Management Plan Working Group.

Curve Lake First Nation

[Curve Lake First Nation](#) people are the Michi Saagig or Mississaugas of the great Anishinaabeg Nation. The name Anishinaabe is derived from an-ish-aw, meaning “without cause” or “spontaneous,” and the word in-au-a-we-se, meaning “human-body.” This translates to mean “spontaneous man.” The Anishinaabe did not have a written alphabet, but they did have a set of picture symbols or pictographs which were used to educate through stories. Traditional teachings have taught that before contact they shared the land with the Odawa and Huron nations. They are the traditional people of the North shore of Lake Ontario and its tributaries; this has been Mississauga territory since time immemorial. [68]

In 2025, CNL and Curve Lake First Nation worked together to update and renew the CLFN Contribution Agreement. The two-year Agreement extension was signed in August 2025.

Individual quarterly meetings were held with Curve Lake First Nation consultation staff in 2025 for mutual information sharing and updates. Canadian Nuclear Laboratories Indigenous Relations and ERM provided project updates and specific discussion topics were identified in collaboration with the Nation including an in-depth overview of the Ottawa River Fish Study, updates related to the progress of the Waterworks West restoration project, and an overview of new options for property owners participating in the PHAI cleanup.

In September, CNL was pleased to provide sponsorship for the Curve Lake First Nation annual Pow Wow and several CNL staff were able to attend.

In October, HWP IR staff attended the Curve Lake First Nation Alternative Routes Career Fair to support the Nation’s economic development and member-capacity development initiatives and share information about CNL careers.

Curve Lake First Nation invited CNL Indigenous Relations staff to the community for a tour, and visit to their aquaponic facility, followed by lunch, a meeting and a cultural teaching.

Georgina Island First Nation

[Chippewas of Georgina Island](#) is an Anishinaabe Nation located on the southern shores of Lake Simcoe. Their ancestors were inhabitants of the Lake Simcoe region long before the arrival of settlers. Six years after a government experiment to colonize the Chippewa people in 1830, Chief Joseph Snake moved his people back to Snake Island, and then to Georgina Island as the community grew. Georgina Island was the first community in Canada to ratify The Framework Agreement on First Nation Lands Management and preserve inherent rights to hunt, fish, and gather. [69]

As a member of the Williams Treaties First Nations, Georgina Island First Nation has been identified as potentially having interest in the project based on their proximity and interest in other projects in the area local to PHAI undertakings.

In 2025, Georgina Island First Nation continued to receive invitations and agendas for the quarterly meetings with the Williams Treaties First Nations. Canadian Nuclear Laboratories provided information, newsletters, project updates and public disclosures, opportunities for review and comment on draft plans and reports as well as information and an invitation to participate in the PHAI Invasive Species Management Plan Working Group.

Hiawatha First Nation

[Hiawatha First Nation](#) is located on the north-shore of Rice Lake, east of the Otonabee River in Otonabee Township, approximately 30 kilometres south of Peterborough. The First Nation consists of approximately 2,145 acres of land of which 1523 are under certificates of possession. [70]

Individual quarterly meetings were held with Hiawatha First Nation consultation staff in 2025 for mutual information sharing and updates. Canadian Nuclear Laboratories Indigenous Relations and ERM staff provided project updates and specific discussion topics were identified in collaboration with the Nation including an update Port Hope Harbour work and opportunities to observe de-fishing activities, updates related to the progress of the Waterworks West Project, the Ecological Land Classification conducted at the Port Grany Project site, an update on archaeological assessments on the Port Hope Project and an overview of cleanup options available to property owners participating in the PHAI.

Canadian Nuclear Laboratories was pleased to sponsor the Hiawatha First Nation Pow-Wow held in May.

Mississaugas of Scugog Island First Nation (MSIFN)

The [Mississaugas of Scugog Island First Nation](#) moved into southern Ontario from their former homeland north of Lake Huron around the year 1700. The Mississaugas are a branch of the greater Ojibwa Nation, one of the largest native groups in Canada. From time immemorial, Mississauga people secured all their needs from the surrounding environment (“Mother Earth”); hunting and fishing and harvesting plant materials for food and medicines. Wild rice, an important food staple, grows in shallow water and was gathered in late summer using birch bark canoes. [71]

Canadian Nuclear Laboratories and Mississaugas of Scugog Island First Nation worked together to develop the first Relationship Agreement between the parties. The agreement was signed in July 2025 and covers a period of five years.

Individual quarterly meetings were held with Mississaugas of Scugog Island First Nation consultation staff in 2025 for mutual information sharing and updates. Canadian Nuclear Laboratories Indigenous Relations and ERM staff provided project updates and specific

discussion topics were identified in collaboration with the Nation including an update on the Nuclear Power Demonstration Restoration Plan and the CNL Cleanup Criteria Amendment application proposal.

In July 2025 CNL hosted two representatives from Mississaugas of Scugog Island First Nation, a representative of Alderville First Nation and CNL Indigenous Relations and Environmental staff to observe the de-fishing of the Ganaraska River in preparation to repair damaged river walls in the vicinity. The proximity of the de-fishing boat to the bank of river allowed participants to clearly observe the activities and ask questions of the staff carrying out the work; CNL received positive feedback on the experience from the participating Nations and later circulated an overview report of the fish captured.

In 2024, Mississaugas of Scugog Island First Nation expressed interest in participating in the Risk Assessment to be conducted at the Chemetron Lagoon site. Canadian Nuclear Laboratories shared historical documentation to provide context and any newly developed documents. In 2025, CNL shared the Risk Assessment Pre-Submission form with MSIFN for review and comment; comments were dispositioned and feedback applied. In October, two representatives of MSIFN participated with CNL and contractor staff for a Phase 1 Environmental Site Assessment walkdown at the Chemetron Lagoon site and vicinity. Feedback on the activity was positive and, following internal review, the written report will be shared with MSIFN for review and comment.

Canadian Nuclear Laboratories was pleased to make a financial contribution to support the MSIFN annual Pow Wow held in July.

15.2.1.2 Organizations with Interests

Anishinabek Nation

The [Anishinabek Nation](#) established the Union of Ontario Indians (UOI) as its secretariat in 1949. The UOI was established because the Anishinabek Nation did not legally exist, and a legal entity was required to enter into legally binding agreements. The Anishinabek Nation is a political advocate for 39 member First Nations across Ontario. The Anishinabek Nation is the oldest political organization in Ontario and can trace its roots back to the Confederacy of Three Fires, which existed long before European contact. [72]

Canadian Nuclear Laboratories provides Anishinabek Nation (AN) with updates through project information mailings and circulates invitations for special events including Industry Day, career fairs and information sessions. Over the years, at their request CNL has provided project overviews and site tours for AN representatives.

In 2025, CNL continued to provide information, newsletters, project updates and public disclosures to representatives of Anishinabek Nation.

Mohawks of Bay of Quinte

The [Mohawks of the Bay of Quinte](#) are a First Nation within Hastings County, Ontario. They control the Tyendinaga Mohawk Territory, which is a 7,362.5 ha reserve on the shores of Bay of Quinte in south-eastern Ontario, east of Belleville. The ancestral homeland of the Mohawk Nation is the Mohawk River Valley, which is in present day New York State. The Mohawks are considered the easternmost Nation within the Iroquois/Six Nation Confederacy and as such are referred to as the Keepers of Eastern Door. The original Five Nation Confederacy was made up of the Mohawk, Oneida, Onondaga, Cayuga and Seneca Nations. When the Tuscaroras were adopted into the Iroquois Confederacy around 1722, the Iroquois became known as the Six Nations Confederacy. [73]

Over the years, CNL has provided the Mohawks of the Bay of Quinte with updates through project information mailings and circulates invitations for special events including Industry Day, career fairs and information sessions.

In 2025, CNL continued to provide information, newsletters, project updates and public disclosures.

Métis Nation of Ontario

The [Métis Nation of Ontario](#) was formed in 1993 to represent communities and individuals recognized by the Métis Nation within Ontario and works to represent the rights, interests, and collective aspirations of Métis People and communities throughout the province. [74]

Over the years, CNL has engaged with Métis Nation of Ontario and in particular representatives from Region 6, 8 and the Wapiti District Métis Council, and exchanged dialogue and two-way information sharing.

In 2025, CNL continued to provide information, newsletters, project updates and public disclosures via the consultation contact provided at MNO.

15.2.2 Engagement with Indigenous Communities and Organizations

A list of all 2025 engagements with Indigenous communities and organizations is included in Table 31, noting venue including the CNL employee intranet channel myCNL.

Table 31: Indigenous Engagement Activities for 2025

Date	Venue	Activity
2025-01-15	Virtual	Curve Lake First Nation Presentation: PHAI Overview for new consultation staff
2025-01-21	Virtual	Williams Treaties First Nations-CNL ERM Quarterly Mtg - Information Sharing/Updates
2025-01-21	Email	Email circulation of Public Disclosure re: worker injury
2025-01-24	In Person	HWP procurement meeting with external Indigenous business regarding the CNL IR Procurement Strategy

Annual Compliance Monitoring Report

Port Hope Area Initiative Waste Management Project
 Annual Compliance Monitoring Report for 2025
 4500-508760-ACMR-011749 Rev. 0

Information Use

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Date	Venue	Activity
2025-02-26	Virtual	Curve Lake First Nation ERM Quarterly Mtg - Information Sharing/Updates
2025-03-04	Virtual	Alderville First Nation ERM Quarterly Mtg - Information Sharing/Updates
2025-03-05	Email	Email circulation of Public Disclosure re: propane tank leak at Centre Pier
2025-03-05	Virtual	Mississaugas of Scugog Island First Nation ERM Quarterly Mtg - Information Sharing/Updates
2025-03-05	Virtual	Mississaugas of Scugog Island First Nation meeting: Relationship Agreement
2025-03-11	Virtual	Hiawatha First Nation quarterly ERM meeting
2025-03-18	Email	Email circulation of Public Disclosure re: truck collision
2025-04-08	Email	Email circulation of Public Disclosure re: natural gas leak at residential property
2025-04-21	Email	Email circulation of Public Disclosure re: airborne dust-cement at harbour site
2025-04-23	Virtual	Williams Treaties First Nations ERM Quarterly Mtg - Information Sharing/Updates
2025-05-05	Virtual	myCNL article re: Red Dress Day (National Day of Awareness for Missing and Murdered Indigenous Women, Girls & Two-Spirited Individuals (MMIWG2S+))
2025-05-08	Email	Email circulation of Public Disclosure re: unplanned water release
2025-05-27	Virtual	Hiawatha First Nation ERM Quarterly Mtg - Information Sharing/Update
2025-06-04	Virtual	Mississaugas of Scugog Island First Nation ERM Quarterly Mtg - Information Sharing/Updates
2025-06-16	Virtual	myCNL article re: National Indigenous History Month - <i>The Records and the Writings</i>
2025-06-17	Virtual	Alderville First Nation ERM Quarterly Mtg - Information Sharing/Update
2025-06-19	Virtual	myCNL article re: National Indigenous History Month – <i>Learning at Work and at Home</i>
2025-06-23	Virtual	myCNL article re: National Indigenous Peoples Day – <i>CNL Celebrates National Indigenous Peoples Day</i>
2025-06-25	Hybrid	Lunch & Learn: In-person, virtual, video on myCNL – <i>Indigenous Foods & Plant Medicine</i>
2025-06-25	Virtual	myCNL article re: National Indigenous History Month - <i>The Importance of Etuaptmumk</i>
2025-06-26	In Person	Indigenous Business Interest/Networking Day - Alexander Creek Restoration
2025-07-15	Virtual	Williams Treaties First Nations ERM Quarterly Mtg - Information Sharing/Updates
2025-07-16	In Person	WTFN Port Hope Harbour Fish-Out Observation
2025-07-18	Email	Email circulation of Public Disclosure re: smoke observed at LTWMF
2025-07-29	Email	Email circulation of Public Disclosure re: gas line leak at residential sire
2025-08-05	Email	Public Disclosure - contractor truck collision
2025-08-08	Email	Public Disclosure: CNSC warning letter re: placement of uncharacterized radioactive waste into Port Hope LTWMF

Date	Venue	Activity
2025-08-18	Email	Public Disclosure - Unplanned water release at Highland Drive South Ravine
2025-08-27	Virtual	Curve Lake First Nation ERM Quarterly Mtg - Information Sharing/Update
2025-09-16	Virtual	Mississaugas of Scugog Island First Nation ERM Quarterly Mtg - Information Sharing/Updates
2025-09-18	Email	Public Disclosure - Gas line strike
2025-09-23	Virtual	Alderville First Nation ERM Quarterly Mtg - Information Sharing/Updates
2025-09-25	Virtual	Hiawatha First Nation ERM Quarterly Mtg - Information Sharing
2025-09-29	Virtual	myCNL article: Truth & Reconciliation Day: <i>Ten Years of Truth & Reconciliation</i>
2025-09-29	Hybrid	Lunch & Learn: in-person, virtual, video posted on myCNL – <i>Ten Years of Truth & Reconciliation Panel Discussion</i>
2025-10-02	In Person	HWP Wellness Fair: Presentation/Booth: A Guide to Physical, Mental, Emotional and Spiritual Balance
2025-10-21	In Person	Curve Lake First Nation Alternative Routes Career Fair
2025-10-21	Virtual	Williams Treaties First Nations ERM Quarterly Mtg - Information Sharing/Updates
2025-10-29	In Person	Mississaugas of Scugog Island First Nation - Sculthorpe Marsh Environmental Assessment walkdown
2025-11-05	In Person	Take Your Kids to Work Day - IR staff workshop
2025-11-05	Virtual	myCNL article re: Treaty Week – <i>The Treaties Recognition Week Act</i>
2025-11-25	Virtual	Hiawatha FN Quarterly ERM Mtg
2025-11-26	In Person	Curve Lake First Nation In-Community Cultural Day
2025-11-27	Email	Waste haulage truck driven off road
2025-12-03	Virtual	Mississaugas of Scugog Island First Nation ERM Quarterly Mtg - Information Sharing/Updates
2025-12-09	Virtual	Alderville First Nation ERM Quarterly Mtg - Information Sharing/Updates
2025-12-10	Virtual	Hiawatha First Nation ERM Quarterly Meeting - Information Sharing/Updates
2025-12-16	Email	Circulated of Port Hope Project fall newsletter

15.2.3 Contribution/Relationship Agreements

Canadian Nuclear Laboratories supports the development of contribution/relationship agreements to provide funding to ensure Indigenous communities remain actively involved in CNL communications, engagement, and project planning.

Agreements may include financial support for staff time related to administration, community liaison activities and meetings; technical documentation review; and environmental and habitat assessments as well as community capacity building through skills training and job shadowing.

In 2025, CNL completed extensions on two agreements, finalized a new Relationship Agreement and worked closely with a fourth Nation on the development of a new Agreement. Staff will continue to work directly with each Nation develop community-specific agreements that meet their individual needs.

Canadian Nuclear Laboratories remains open to developing Contribution/Relationship Agreements with other Indigenous communities and organizations.

15.2.4 Indigenous Knowledge Systems

The CNL Indigenous Relations program includes ongoing enhancement of participation and collaboration with Indigenous communities and organizations. Canadian Nuclear Laboratories seeks input to apply guidance and Indigenous knowledge systems into project activities as part of the goal of meaningful interaction and engagement with Indigenous communities and peoples.

At their request, Mississaugas of Scugog Island has been involved in the risk assessment process for the Chemetron Lagoon site since 2024. In 2025, CNL circulated draft Pre-Submission form for Chemetron Lagoon for review and comment. In October, representatives of MSIFN participated in a Phase 1 Environmental Site Assessment at the Sculthorpe Marsh sites (next to the Chemetron Lagoon site) – once CNL has completed internal review on the report for that exercise, it will be circulated to participants for review and comment.

In 2025, CNL circulated the following documents in Table 32 to the Williams Treaties First Nations for review and comment. Comments received are dispositioned, further discussed where required and applied to project plans and reports wherever applicable.

Table 32: Documents Submitted for Review and Comment

Date	Document	Comments Received From
2025-09-25	<i>Port Hope Project Long-Term Waste Management Facility Hydroseeding Plan</i>	Curve Lake First Nation Mississaugas of Scugog Island First Nation
2025-12-03	<i>PHP Long-Term Waste Management Facility Tree Screen & Phragmites Control Plan</i>	Hiawatha First Nation Curve Lake First Nation Mississaugas of Scugog Island First Nation

Through ongoing collaboration with Indigenous communities, CNL will continue to engage on this approach for various project sites and work to incorporate Indigenous knowledge systems and worldviews into its environmental programming and project planning and execution.

15.2.5 Archaeology Program

The *CNL Protocol for Archaeological and Forensic Discovery* outlines the required procedure should items of potential archaeological, Indigenous, or cultural heritage significance be uncovered during PHAI work. The protocol requires that CNL and the archaeologist overseeing

the site engage with cultural heritage liaisons from Indigenous communities if any objects of potential Indigenous interest are uncovered during excavation activities. Canadian Nuclear Laboratories ensures that Indigenous communities remain engaged and involved in all stages of the archaeological work.

Mandatory archaeological training is provided to all PHAI front-line project staff and contractors to outline what to expect during field work, what to watch for and the steps required when uncovering an object of potential significance.

In October 2025, CNL notified the Williams Treaties First Nations of plans to conduct a Stage 1 archaeological assessment in the vicinity of the Port Hope Pioneer Cemetery. Alderville First Nation expressed interest in participating in the process and is being kept up to date as the process continues.

15.2.6 Indigenous Business and Trade Liaison

Canadian Nuclear Laboratories is committed to implementing Call to Action #92 in the Truth and Reconciliation Commission report to actively promote and enable economic opportunity for Indigenous Businesses.

To facilitate access to CNL supply chain opportunities, the PHAI website includes links to CNL's [Indigenous Vendor Portal](#) to connect potential or current Indigenous suppliers with information on procurement opportunities for goods, services, equipment, decommissioning and construction. Canadian Nuclear Laboratories circulates information on PHAI and CNL business and employment events, including CNL industry days and career fairs as well as job opportunities to Indigenous communities and organizations. Throughout the year, CNL responded to inquiries from and held meetings with Indigenous businesses and contractors and facilitated introductions to CNL contractors working on the PHAI.

Introduced in 2023, the CNL [Indigenous Relations Procurement Strategy](#) [75] sets out how CNL intends to deliver on its commitments and provides a vehicle for engagement and consultation on CNL's supply chain approach to Reconciliation. The strategy was developed in collaboration with Indigenous Nations and is evolving to properly meet the needs of Indigenous-owned businesses.

In 2025, CNL contracted Voyageur, owned by Missisaukas of Scugog Island, to conduct the Ecological Land Classification of the Port Granby Project site.

In June, CNL held its first Indigenous Business Interest/Networking Day, inviting Indigenous-owned businesses to attend and learn more about an upcoming contract for the restoration of Alexander Creek in Port Hope. Invitations were circulated to the seven Williams Treaties First Nations with a request to forward to their economic development branches for further distribution to their business networks and contacts. Five Indigenous businesses and two Nations registered to attend – the afternoon began with a presentation on the CNL Indigenous procurement strategy and approach and overview of the project, followed by an opportunity for attendees to speak with project and procurement staff.

Canadian Nuclear Laboratories will continue to inform Indigenous Nations about upcoming contracting opportunities and identify opportunities for set-aside bids on PHAI projects.

15.2.7 Information Sharing

Canadian Nuclear Laboratories routinely engages in two-way dialogue and encourages information sharing to learn more about local Indigenous communities and organizations. Canadian Nuclear Laboratories distributes PHAI newsletters, media releases, public disclosures, and invitations to special events to Indigenous communities and organizations via email.

Public Disclosures as listed in Section 15.1.3 are shared directly with Indigenous communities and organizations by email with the offer to provide more information and respond to any questions or concerns.

Links to the [PHAI](#) and [CNL Public Disclosure](#) pages are included in each agenda for quarterly meetings with the Williams Treaties First Nations and individual Nations and a section of the agenda is dedicated to discussing any outstanding questions or concerns.

In May 2025, invitations were circulated to Indigenous communities and organizations for CNL's ribbon-cutting event at Port Hope Lions Recreation Centre Park. The event marked the re-opening of the park after extensive remediation and restoration to a neighbourhood park.

In December 2025, CNL distributed the fall newsletter to all Indigenous communities and organizations who have expressed interest in being kept up to date on project activities.

15.2.8 Monitoring Concerns and Incorporating Feedback

Canadian Nuclear Laboratories maintains open dialogue with Indigenous communities and organizations to strengthen understanding of Indigenous worldviews and relationship to the land and monitor concerns about PHAI activities.

Through ongoing engagement with Indigenous communities, consistent issues and concerns have been identified for CNL to address including:

- How project development might interfere/accommodate animal movement and migration at project sites.
- Accommodation/mitigation for Species at Risk in work areas.
- Fish relocation and habitat restoration in harbour area.
- Maintenance of groundwater quality and the prevention of seepage.
- Frequency of well sampling/testing.
- Plans to prevent the incursion of invasive species in work areas.
- CNL archaeological protocols.
- Arsenic and radiological cleanup criterion changes.
- Indigenous participation/monitoring of project activities.

Indigenous communities have urged CNL to leave remediated sites in better condition than when the project began, balancing the commitment to remove contaminated soils with the protection of lands and waters.

Comments received on draft plans, reports, etc. are dispositioned and a record circulated to all reviewers with the updated document outlining how each comment was dispositioned and applied or not applied and the reasoning.

See Section 15.2.4 for details on incorporating feedback into plans and reports.

15.2.9 Documentation and Reporting

To measure the effectiveness of CNL engagement, all interactions are tracked and recorded included comments and questions at meetings. Responses are provided in writing with input from subject-matter experts where required.

To further enhance information sharing, CNL established regular update meetings with CNSC Indigenous relations staff in 2022 for mutual information sharing and details on engagement with Indigenous communities and organizations; those meetings continued monthly in 2025.

15.2.10 Canadian Nuclear Laboratories Staff Education and Awareness

Canadian Nuclear Laboratories recognizes that all employees are ultimately responsible for the corporate commitment to truth and reconciliation as outlined in *Call to Action #92 - Business and Reconciliation* [64].

The evolution of CNL Indigenous Relations includes ongoing enhancement of education and awareness training for all employees. In October, CNL's HWP Indigenous Engagement Advisor participated in the office Wellness Fair, providing personal insight and cultural teachings on physical, mental, emotional and spiritual balance.

Throughout 2025, HWP Indigenous Relations staff continued to contribute to CNL's employee education program with cultural teachings related to Indigenous days of commemoration, information sharing for all staff.

Indigenous relations staff also make themselves available for one-on-one conversations and questions from staff.

Throughout the year, CNL Indigenous Relations provided employees with information, resources and cultural teachings to support their ongoing learning through books, video and links to free online courses.

Indigenous days of commemoration were recognized throughout the year with articles and cultural teachings circulated to all staff via email and made available to all CNL staff through the employee intranet myCNL. PHAI Indigenous Relations staff coordinated special features commemorating Awareness for Missing and Murdered Indigenous Women and Girls, National Indigenous History Month, National Indigenous Peoples Day and Treaty Week.

Lunch and learn sessions were offered through the year in a hybrid format for in-person and virtual attendance with recordings posted on myCNL for later viewing including a session focusing on *Indigenous Foods & Plant Medicine* and a panel session commemorating 10 years since the publication of the Truth & Reconciliation Commission report. Indigenous Relations staff from each of the CNL sites provided an overview of Indigenous Relations at CNL and answered questions from staff on the progress CNL is making in our commitment to Truth & Reconciliation and Call to Action # 92.

At each quarterly HWP all-staff meeting, Indigenous Relations staff provided an update on recent initiatives and activities along with information on further resources.

15.2.11 Employee Training

In 2024, CNL Indigenous Relations staff completed development on the first in a planned series of training modules to enhance learning for employees. The mandatory training provides an overview of the international, national and corporate protections of Indigenous rights and an overview of the CNL Reconciliation Action Plan currently in development. Once launched, all CNL employees were required to complete the module as part of CNL's mandatory training program and all new CNL employees are assigned the training as part of the onboard process.

15.3 Remedial Cleanup Criteria

The PHAI Cleanup Criteria were developed and introduced during the environmental assessment phase of the project. The PHAI cleanup criteria apply to radiological and non-radiological substances. To verify the achievement of the PHAI Cleanup Criteria, or to confirm that a site already achieves the cleanup criteria, CNL has implemented remediation verification procedures that provide guidance on field screening, verification sampling, and laboratory analysis.

In accordance with the *PHAI LCH* [3], CNSC staff were notified ([76] to [77]) of revisions to the following procedures:

- *Port Hope Project Small-Scale Sites Remedial Process* [78].
- *Arsenic Coal Ash and Other Wastes Decision Matrix for Identification of Historic LLRW in Port Hope Soil* [79].

During the reporting period, CNL continued to work with the MPH to ensure council and staff were kept informed on the proposal to amend the PHAI Cleanup Criteria for arsenic. CNL continued to progress the initiative. See Section 15.1.6.7 and refer to the PHAI website for more details: [Application to amend the PHAI Cleanup Criteria](#) [80].

16. Concluding Remarks

In the 2025 calendar year, the PHAI continued to carry out our program of work with an unwavering commitment to safe operations. During this period, the PHAI successfully protected

the health and safety of persons, the environment, national security and international obligations, while implementing improvements to strengthen our performance into the future. This enabled the PHAI to perform its mission on behalf of Canadians - restoring and protecting the environment.

This Annual Compliance Monitoring Report demonstrates that CNL's PHAI has successfully met the requirements of the Nuclear Safety and Control Act, regulations and the CNSC Waste Nuclear Substance Licence requirements. Canadian Nuclear Laboratories continues to make adequate provision to protect the health, safety, and security of workers, the public, and the environment, and continues to implement Canada's international obligations on the peaceful use of nuclear energy. This enabled CNL to perform its three missions on behalf of Canadians – restoring and protecting the environment, developing clean energy technologies for today and tomorrow, and improving the health of Canadians.

17. Acronyms

Acronym	Definition
ACMR	Annual Compliance Monitoring Report (formerly Annual Safety Review (ASR) or Annual Compliance Report (ACR))
AECL	Atomic Energy of Canada Limited
ALARA	As Low As Reasonably Achievable
CNL	Canadian Nuclear Laboratories
CNSC	Canadian Nuclear Safety Commission
CRL	Chalk River Laboratories
EnvP	Environmental Protection
EQ	Exemption Quantity
ERM	Environmental Remediation Management
FSA	Functional Support Area
HOIR	Hazardous Occurrence Investigation Reports
HSSE	Health, Safety, Security, and Environment
HWP	Historic Waste Program
HWP MO	Historic Waste Program Management Office
IAEA	International Atomic Energy Agency
ImpAct	Improvement Action
LCH	Licence Conditions Handbook
LLRW	Low-Level Radioactive Waste
LMS	Learning Management System
MPH	Municipality of Port Hope
NEW	Nuclear Energy Worker
NNC	Notice of Non-Compliance
OSH	Occupational Safety and Health
PG LTWMF	Port Granby Long-Term Waste Management Facility
PGP	Port Granby Project

Acronym	Definition
PG WMF	Port Granby Waste Management Facility
PG WWTP	Port Granby Waste Water Treatment Plant
PHAI	Port Hope Area Initiative
PHAI LCH	Port Hope Area Initiative Licence Conditions Handbook
PH LTWMF	Port Hope Long-Term Waste Management Facility
PHP	Port Hope Project
PH WWTP	Port Hope Waste Water Treatment Plant
REGDOC	Regulatory Document
RP	Radiation Protection
SAT	Systematic Approach to Training
SCA	Safety and Control Area
SSHC	Site Safety and Health Committee
TDG	Transportation of Dangerous Goods
WWMF	Welcome Waste Management Facility

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