

2026 July 23

Candace Salmon, Commission Registrar
 Canadian Nuclear Safety Commission
 280 Slater Street
 P.O. Box 1046, Station B
 Ottawa, Ontario K1P 5S9

Dear Ms. Salmon,

**Amended Application for Renewal of the Nuclear Research and Test Establishment
 Decommissioning Licence for Whiteshell Laboratories**

This letter serves as Canadian Nuclear Laboratories (CNL) application to the Canadian Nuclear Safety Commission (Commission) to request the renewal of the Nuclear Research and Test Establishment Decommissioning Licence for Whiteshell Laboratories (WL), NRTEDL-W5-8.00/2027, which expires 2027 December 31 [1]. CNL is requesting an 8-year licence, starting 2028 January 01.

This application has been previously submitted to the Commission Registry on 2026 April 30 [2]. The amended application is being resubmitted to the CNSC Commission Registrar as requested following a sufficiency check from CNSC staff [3].

The information required to be contained in a licence renewal application pursuant to the *Nuclear Safety and Control Act* [4] and associated regulations is provided in Enclosure 1 [5]. In addition, a supplementary report, aligned with REGDOC-1.2.2, *Licensing Application Guide: Class IB Processing Facilities* [6], is included with this application as Enclosure 2 [7]. The report provides information on CNL programs, a summary of CNL's capabilities, the status of key projects and outlines the activities CNL will undertake in the next licence period. Together this application and the enclosures provide detailed information demonstrating CNL will continue to make all necessary provisions to protect the health, safety, security of persons and the environment, and maintain national security and measures required to implement international obligations.

WL was established in 1963 as Canada's second national laboratory for the peaceful research and application of nuclear technology. Core research and development programs included fuel development, reactor safety, waste management, and hydrogen safety. Notable facilities included the WR-1 reactor, which tested reactor component configurations and various fuel

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types in the shielded facilities, including hot cells and multiple accelerators. Other unique research facilities included the full scale thermal hydraulic test loop, which was configurable as any CANDU reactor, and various hydrogen combustion test cells (these facilities have since been decommissioned). Notable research programs led to the development of the deep geologic disposal method for spent fuel, the dry storage of spent fuel in concrete canisters, and the immobilization of used fuel. WL also had extensive biology research programs for the study of radiation effects on fauna and flora.

The hot cells continue to remain operational and are amongst the best-conditioned facilities of their kind in Canada.

WL is Canada's first and largest scale, nuclear restoration project. CNL has pioneered decommissioning strategies and tactics at this site, resulting in the safe demolition of over 45 buildings. CNL has developed deep experience in waste management of hazardous and non-hazardous materials.

CNL's request for an 8-year licence is supported by its extensive experience in operating and decommissioning the WL site, the demonstrated maturity of its programs, a well-documented, stable, and declining hazard profile, and the continued strengthening of relationships with Indigenous Nations through engagement on site restoration goals and site activities. CNL will provide routine and required updates to CNSC staff and the Commission aligned with licence conditions, REGDOCs and other requirements. Further justification for the proposed 8-year licence term is provided in Attachment A.

WL will maintain the current scope of authorized activities into the next licence period, including the continued use and operation of existing facilities, such as material handling activities within the hot cells, and will continue the decommissioning of the site. CNL is proposing a consolidation of the WL on-site licence to transport with the existing WL Site Licence, as detailed in Attachment B. CNL is also proposing that the financial guarantee for WL be applicable for the duration of the licence, as detailed in Attachment C. Any activity outside the licensing basis will trigger a licence amendment, ensuring continued compliance with CNSC requirements.

Additional supporting information for the application is included as follows:

- **Attachment A:** Justification for the requested licence term.
- **Attachment B:** Request to include an on-site Licence to Transport as part of the WL decommissioning licence.
- **Attachment C:** Request to accept the 2015 expressed commitment by the Minister of Natural Resources as the enduring financial guarantee for the WL site.
- **Attachment D:** Planned engagement for the WL Licence renewal.
- **Attachment E:** List of documents submitted to support this application.

CNL is committed to building and growing long-term, mutually beneficial working relationships with Indigenous Nations and communities regarding the Whiteshell Laboratories Restoration Project, including the future of the site. Our relationships are developed on a foundation of respect for the rights of Indigenous Nations, and our goal is to build and preserve openness,

transparency, and trust. CNL is steadfast in its commitment to supporting meaningful engagement through the licence renewal application process and subsequent licence terms.

CNL believes in open and transparent communication in a timely manner to maintain positive and supportive relationships, and confidence of local communities, key audiences, and Indigenous Nations, communities, and organizations. CNL's Public Information and Disclosure Program [8] provides a structured approach for transparent communication, including regular updates on operations, environmental performance, and developments on WL relicensing. This includes regular meetings with First Nations, the Manitoba Métis Federation, and the Public Liaison Committee, as well as municipal meetings and community engagements. CNL recognizes that Indigenous perspectives and public input are critical in licensing decisions. CNL values intervenor perspectives and welcomes opportunities to address both in-person (oral) and written interventions at the upcoming WL licence renewal Commission proceeding.

CNL is committed to maintaining open channels for engagement throughout the relicensing process and beyond, and has established a targeted communications strategy for that purpose, see Attachment D.

The licence application does not request any changes to the current licenced activities. As a result, CNL does not anticipate any new or novel potential adverse impacts on constitutionally protected Aboriginal and/or treaty rights, which could trigger the Crown's duty to consult, and accommodate, if any. The Crown must ultimately determine whether the honour of the Crown, and the duty to consult, and accommodate, if any, are engaged. Early engagement activities with Indigenous Nations, communities, and organizations on licence renewal are further described in Attachment D and CNL intends to continue meaningful engagement during the licence renewal process as described therein. If CNL becomes aware of any alleged potential adverse impacts to constitutionally protected rights, CNL will advise accordingly.

This application does not include a request for a licence amendment related to decommissioning of the WR-1 reactor via in-situ disposal.

Should you require any further information please contact me at 204-266-2588.

Yours sincerely,



Allan Caron

Director, End State Strategy, and Whiteshell Laboratories Site Licence Holder

Enclosures (2)

Attachments (5)

REFERENCES:

- [1] Canadian Nuclear Safety Commission, *Whiteshell Laboratories Nuclear Research and Test Establishment Decommissioning Licence*, NRTEDL-W5-8.00/2027, Expiry Date: 2027 December 31.
- [2] CNL Letter, B. Wilcox (CNL) to C. Salmon (CNSC), *Application for Renewal of the Nuclear Research and Test Establishment Decommissioning Licence for the Whiteshell Laboratories*, WLD-CNNO-26-0025-L (Doc ID PPKDV525TDVY-1688056875-210), 2026 April 30.
- [3] CNSC Letter, N. Greencorn (CNSC) to A. Caron (CNL), *CNL-WL - CNSC Staff Review of CNL Application for Renewal of the Nuclear Research and Test Establishment Decommissioning Licence for the Whiteshell Laboratories (NRTEDL-W5-8.00/2027)*, WLD-NOCN-26-0038-L (Doc ID PPKDV525TDVY-1688056875-269), 2026 June 23.
- [4] *Nuclear Safety and Control Act*, S.C. 1997, c. 9, Canada.
- [5] *WL 2027 Licence Renewal Application – Information pursuant to the Nuclear Safety and Control Act*, WLD-508760-160-000, Revision 1, 2026 July. (enclosed)
- [6] REGDOC-1.2.2, *Licensing Application Guide: Class IB Processing Facilities*.
- [7] *WL 2027 Licence Renewal Application – Supplemental Information*, WLD-508760-041-000, Revision 1, 2026 July. (enclosed)
- [8] *Public Information Program for Canadian Nuclear Laboratories*, CW-513430-REPT-001, Revision 10.0, 2024 October.

cc. N. Greencorn (CNSC) C. Howden (CNSC) B. Nguyen (CNSC)
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ATTACHMENT A. SUMMARY JUSTIFICATION FOR THE REQUESTED LICENCE TERM**Request**

Canadian Nuclear Laboratories (CNL) is requesting an 8-year licence for Whiteshell Laboratories (WL).

Background and Justification

Whiteshell Laboratories (WL) has played a significant role in advancing Canadian nuclear science and technology for decades. Today, WL is advancing one of Canada's most complex nuclear remediation projects, focused on site restoration and preparing the land for its long-term future. Considerable progress has been achieved: more than 45 structures have been safely removed, and over 6,700 cubic metres of low- and intermediate-level waste have been safely transported to Chalk River Laboratories for secure storage. When decommissioning is complete, areas affected by CNL's past operations will have been remediated, with less than one per cent of the former laboratories site remaining under long-term institutional controls (access restriction and enhanced environmental monitoring).

CNL continues to advance this work with a commitment to safety, regulatory compliance, and continuous improvement. Over the past several years, the WL team has strengthened its safety culture, enhanced compliance programs, and implemented improvements informed by operational experience. Engagement with Indigenous Nations and local communities remains central to this effort, ensuring their perspectives are reflected in the long-term vision for the site.

Consistent with established regulatory practice for long-term operations and decommissioning sites, an 8-year licence term provides a stable and efficient planning horizon for WL to progress through defined, multi-year operations and restoration activities. Licence durations in this range are commonly applied across comparable sectors—including WL's previous licence periods, prototype reactor facilities, and long-term remediation or mine-closure sites. The Canadian Nuclear Safety Commission (CNSC) continues to conduct its regular compliance verification and assessments independent of licence duration.

CNL's request for an 8-year licence for the WL site is based on the following:

Experience: CNL has decades of experience in operations, decommissioning, and waste management at the WL site. Since the early 2000s, the WL team of nuclear professionals has carried out a broad range of operational and decommissioning activities, gaining extensive technical and project execution expertise. Throughout this period, the protection of workers, the public, and the environment has remained CNL's highest priority, reflected in ongoing enhancements to safety culture, management systems, and operational oversight. This long-standing experience, combined with demonstrated commitment to performance improvement, supports CNL's capability to safely and effectively manage the WL site over the requested licence term.

Mature Programs: CNL applies a suite of mature and continuously improving management programs that collectively drive excellence across all Safety and Control Areas. These programs operate through a disciplined cycle of planning, executing, evaluating results, and implementing improvements, ensuring that actions remain responsive to operational needs and regulatory expectations. As detailed in Enclosure 2 [A-1], CNL has made significant improvements in Fire Protection & Emergency Management and Human Performance. These sustained enhancements, combined with strengthened oversight and robust program execution, provide a solid basis for confidence in CNL's ability to safely and effectively manage the WL site over an 8-year licence period.

Demonstrated and Documented Hazard Profile: Hazards associated with ongoing operating activities and decommissioning work at the WL site are well understood and documented through key licensing basis documents, including the WL Environmental Risk Assessment, Safety Analysis Reports, Detailed Decommissioning Plans, and Fire Hazard Assessments. These comprehensive assessments demonstrate a stable and well-characterized hazard profile, supporting a predictable operating and decommissioning environment. This stability is consistent with licence durations typically applied to long-term decommissioning sites and supports an 8-year term by providing confidence that the remaining work will proceed within a clearly defined safety envelope.

WL Site Restoration Plan Informed by Indigenous and Public Engagement: CNL is advancing the WL Site Restoration Plan through a structured process that incorporates ongoing engagement with Indigenous Nations and the public. This engagement, supported by formal relationship agreements, Indigenous participation in site-level activities, and regular dialogue, ensures that planning for future site conditions, including long-term management of the low-level waste trenches, is informed by Indigenous rights, interests, and perspectives. CNL's public information activities further support transparency and input by providing accessible updates on WL planning and operations. An 8-year licence period provides the stability needed for this engagement to continue meaningfully, and progress decommissioning and environmental remediation activities at the site.

CNL continues to evaluate the long-term opportunities at the WL site. An 8-year Licence provides stability to continue to progress the decommissioning and restoration, while allowing broader future site-use evaluations to be considered transparently and with ongoing engagement of Indigenous Nations and the public.

CNL recognizes that Indigenous perspectives and public input are critical in licensing decisions. CNL is actively engaging Indigenous communities and stakeholders on the proposed licence term and will continue this dialogue throughout the licensing process. Pre-application feedback received from Indigenous Nations, communities, and organizations, and the public has informed this application, and there is neutral to positive support for CNL to seek an 8-year licence. CNL is committed to maintaining open channels for engagement throughout the relicensing process and the next licence term.

Impact

An 8-year licence will enable CNL to demonstrate 5+ years of sustained safety performance, continue to reduce hazards at the WL site by progressing decommissioning and environmental remediation activities, and allows CNL to further refine its end-state plan with a goal of achieving support from Indigenous Nations and surrounding communities, and explore the potential for a modified ongoing mission at the site. CNL will continue to provide routine and required updates to CNSC staff and the Commission aligned with licence conditions, REGDOCs and other requirements.

References:

- [A-1] *WL 2027 Licence Renewal Application – Supplemental Information*, WLD-508760-041-000, Revision 1, 2026 July. (enclosed)

ATTACHMENT B. REQUEST TO INCLUDE AN ON-SITE LICENCE TO TRANSPORT WITHIN THE WL DECOMMISSIONING LICENCE

Background

Canadian Nuclear Laboratories (CNL) has safely and securely transported nuclear materials by road within the boundaries of its Whiteshell Laboratories (WL) site. Historically, authorization for these on-site movements has been requested on an as-needed basis through a Licence to Transport (LTT) application submitted to the Canadian Nuclear Safety Commission (CNSC) staff for review and acceptance.

Requested Change

To streamline CNL and CNSC processes, CNL is requesting to include a LTT for on-site movements within the WL site decommissioning licence. This change does not reduce regulatory requirements or alter safety and security obligations and applies exclusively to movements within the WL site (i.e., it does not alter requirements for off-site shipments).

All information required by the *Packaging and Transport of Nuclear Substances Regulations* (PTNSR) [B-1] and *Nuclear Security Regulations* (NSR) [B-2] to support this request is provided in Enclosure 1, Table 4 and Table 5 respectively [B-3].

Impact

Including this aspect within the site licence is an efficiency and aligns with practices adopted by other licensees where shipments within controlled-access facilities are included within the site licence. Access to the WL site is strictly controlled, and movements of nuclear materials are managed under established procedures, ensuring continued compliance with the PTNSR [B-1] and NSR [B-2].

This requested change represents a consolidation only, which will improve efficiency while maintaining compliance with regulatory requirements. It does not reduce regulatory oversight, security measures, nor emergency preparedness requirements. CNL remains committed to maintaining and updating its Transportation Security Plan [B-4] and the WL Site Emergency Response Plan [B-5] to ensure ongoing compliance and safety.

References:

- [B-1] *Packaging and Transport of Nuclear Substances Regulations*, SOR/2015-145, Canada.
- [B-2] *Nuclear Security Regulations*, SOR/2000-209, Canada.
- [B-3] *WL 2027 Licence Renewal Application – Information pursuant to the Nuclear Safety and Control Act*, WLD-508760-160-000, Revision 1, 2026 July. (enclosed)
- [B-4] *WL Transportation Security Plan*, 119-508710-PLA-021, Revision 0, 2026 March.
- [B-5] *Whiteshell Laboratories Site Emergency Response Plan*, WL-508730-PLA-001591, Revision 1.0, 2026 April.

ATTACHMENT C. REQUEST TO ACCEPT THE 2015 EXPRESSED COMMITMENT BY THE MINISTER OF NATURAL RESOURCES AS ENDURING FINANCIAL GUARANTEE FOR THE WL SITE

Background

REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities* [C-1] requires licensees to maintain a financial guarantee that meets the criteria of liquidity, certainty of value, adequacy, and continuity, and that the instrument is reaffirmed every five years or upon licence renewal.

In 2015, the Minister of Natural Resources issued a letter providing an expressed commitment from the Government of Canada to ensure sufficient financial resources are available for the decommissioning of the Whiteshell Laboratories (WL) site (the “Commitment”) [C-2]. The Commitment represents a direct obligation from the federal government and is recognized under REGDOC-3.3.1 [C-1] as an acceptable financial guarantee instrument. The Commission has confirmed its satisfaction with the adequacy of the financial guarantee to support future decommissioning activities in multiple past Records of Decision including the 2024 WL Licence Renewal [C-3]. The Canadian Nuclear Safety Commission (CNSC) staff accepted the Commitment for purposes of the Nuclear Safety and Control Act and its regulations, most recently in [C-4].

Request

Canadian Nuclear Laboratories (CNL) requests that the Commission accept the Commitment as the financial guarantee for the WL site for the entire term of the proposed licence renewal period.

The Commitment satisfies all requirements set forth in REGDOC-3.3.1 [C-1].

Impact

This approach improves regulatory efficiency by eliminating repeat submissions of the Minister of Natural Resources letter. It ensures sustained regulatory certainty and supports streamlined compliance for both the CNSC and CNL.

References:

- [C-1] Canadian Nuclear Safety Commission, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities*, REGDOC-3.3.1, 2021 January.
- [C-2] Letter, G. Rickford (NRCan) to M. Binder (CNSC), untitled, relating to provision of financial guarantees for CNL sites in Canada, 145-NRCANNO-15-0001-L, 2015 July 31.
- [C-3] Canadian Nuclear Safety Commission, Record of Decision, *Application to Renew the Nuclear Research and Test Establishment Decommissioning Licence for Whiteshell Laboratories*, DEC 24-H7, 2024 December 11.

- [C-4] Letter, N. Greencorn (CNSC) and S. Watt (CNSC) to A. Tisler (CNL), *CNL-CRL – CNSC Staff Review of Canadian Nuclear Laboratories' Submission of the Information Regarding Financial Guarantees for all Atomic Energy of Canada Limited Sites Operated by Canadian Nuclear Laboratories*, 145-NOCN-25-0038-L, 2025 October 02.

ATTACHMENT D. PLANNED ENGAGEMENT FOR THE WL LICENCE RENEWAL

In alignment with Canadian Nuclear Laboratories' (CNL's) Public Information Program (PIP), CNL is engaging Indigenous Nations, Governments, communities, and organizations on the licence renewal process for the Whiteshell Laboratories (WL) site. CNL's Public Information and Disclosure Program outlines public activities that occur at CNL, with the objective of addressing the information needs of interested parties. The program has been prepared in accordance with the Canadian Nuclear Safety Commission (CNSC) REGDOC-3.2.1, *Public Information and Disclosure* [D-1]. Key audiences for engagement at WL are detailed in the PIP and listed in Section 1.5 of Enclosure 2 [D-2].

Throughout the licence renewal process, CNL will provide opportunities for discussion and will record and consider all feedback. Feedback will be applied, where applicable, to further refine messaging, address common questions, and maintain open dialogue throughout the engagement process. CNL may undertake various means and methods to assess the general public's level of knowledge and awareness in order to assess the effectiveness of CNL's communications efforts.

Reporting on CNL's engagement efforts will be included in CNL's Commission Member Document.

CNL plans to facilitate ongoing communications and engagement with key audiences about the licence renewal process and the next licence period through a phased approach outlined below.

Phase 1 Engagement: Pre-licence application – 2026 January to 2026 April

With CNL planning to submit its licence application in 2026 April, engagement with Indigenous Nations, local elected officials, and the public focused on the licensing process and CNL's consideration of a longer licence term. This engagement was facilitated through:

- Regularly recurring meetings with Indigenous Nations
- Site tours and presentations with elected officials from local municipalities
- A public webinar
- Six municipal Council Seminar Workshops
- Two community open houses

Phase 2 Engagement: Pre-hearing – 2026 May to 2027 September

For the remainder of 2026, CNL will focus on continuing to share updates about the licence renewal process and key dates in all ongoing Indigenous and public engagements.

In 2027, CNL will look to identify intervenors to ensure concerns and interests are proactively considered and addressed where possible. CNL will support all intervenors by providing all necessary information; ensuring timely responses to licensing inquiries; and support with the preparation of key hearing material, including the Commission Member Document and summaries of Indigenous and public engagement. In particular, CNL will provide all engaged Indigenous Nations a four-week opportunity to review hearing submission material related to engagement to verify the accuracy of content and mutual understanding of engagement.

Phase 3 Engagement: Next Licence Term – beyond 2028 January

CNL's PIP [D-3] provides a structured approach for transparent communication, including regular updates on operations, environmental performance, and commission proceedings. At WL this includes regular working group meetings with First Nations, the Manitoba Métis Federation, and the Public Liaison Committee, as well as municipal meetings and public engagements. CNL is committed to communicating in a timely manner and exchanging information with all key audiences and rightsholders and recognizes the importance of listening and working with interested parties. CNL will continue to use avenues already established through the PIP and other opportunities that may evolve over time depending on the needs and interests of rightsholders and the public to engage through the next licence term.

References:

- [D-1] Canadian Nuclear Safety Commission, *Public Information and Disclosure*, REGDOC-3.2.1, 2018 May.
- [D-2] *WL 2027 Licence Renewal Application – Supplemental Information*, WLD-508760-041-000, Revision 1, 2026 July (enclosed).
- [D-3] *Public Information Program for Canadian Nuclear Laboratories*, CW-513430-REPT-001, Revision 10.0, 2024 October.

ATTACHMENT E. DOCUMENTS TO SUPPORT THE 2027 WL LICENCE RENEWAL APPLICATION

The records listed below along with a Request for Confidentiality Form (as applicable) were submitted to the Commission Registrar on 2026 May 28 [E-1]. Between the application submission and the commission proceeding for the renewal of the Whiteshell Laboratories (WL) licence, Canadian Nuclear Laboratories (CNL) may make a subsequent submission of documents where document revisions have occurred.

Document Title	Document Number	Revision	Confidential (Y/N)
WL Transportation Security Plan	119-508710-PLA-021	0	Y (prescribed)
Licensing Basis List for Whiteshell Laboratories	900-514300-LST-006931	1.1	N
Administrative Levels and Action Levels for WL Air and Liquid Radioactive Effluent	900-509200-STD-016	0	Y
Radiation Protection Action Levels	900-508740-LST-002	3.0	N
Whiteshell Laboratories Annual Compliance Monitoring Report for 2025	WL-514300-ACMR-010774	0	N
Canadian Nuclear Laboratories Management System Manual	900-514100-MAN-001	3.2	Y
Designated Representatives of the Licensee, Site Licences, Certificates & Permits.	900-514300-LST-001	14.0	Y
Letter, G. Rickford (NRCan) to M. Binder (CNSC), untitled, relating to provision of financial guarantees for CNL sites in Canada	145-NRCANNO-15-0001-L		N
WL Detailed Decommission Plan, Volume 1 – Program Overview	WLDP-02000-DDP-001	2	Y
Pollock & Wright Land Surveyors, TITLE REPORT for Atomic Energy of Canada Ltd. Plant Site Lands	WL-11020-041-000		N
Letter, G. Williamson (AECL) to D. Carr (CNL), Current CNL Applications for Nuclear Facility licence renewals for Chalk River Laboratories and Whiteshell Laboratories- Evidence that CNL has authority from AECL to carry on the licensed activities	145-AECLCNL-26-001-L		N

Document Title	Document Number	Revision	Confidential (Y/N)
Fitness for Duty	900-510000-STD-013	1.2	N
Fitness for Duty: Policy on Managing Alcohol and Drug Use	900-510000-STD-015	1.0	N
Safety and Health – Policy	900-510400-POL-001	4.3	N
Environment – Policy	900-509200-POL-001	3.3	N
WL Effluent Verification Monitoring Plan	WL-509200-PLA-001	2.0	Y
Whiteshell Laboratories <i>Environmental Monitoring Plan</i>	WL-509200-PLA-002	1.2	Y
<i>Public Information Program for Canadian Nuclear Laboratories</i>	CW-513430-REPT-001	10.0	N
Comprehensive Study Report on the Decommissioning of Whiteshell Laboratories (Vol 1, 2 and 3)	WLDP-03702-041-000	0	N
Whiteshell Laboratories Site Emergency Response Plan	WL-508730-PLA-001591	1.0	N
Integrated Waste Strategy	CW-508600-062-000	2.1	N

References:

- [E-1] CNL Letter, B. Wilcox (CNL) to C. Salmon (CNSC), *Application for Renewal of the Nuclear Research and Test Establishment Decommissioning Licence for Whiteshell Laboratories – Submission of the Records*, WLD-CNNO-26-0035-L, 2026 May 28.

Table 1 - General Nuclear Safety and Control Regulations [1]

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
3(1)	An application for a licence shall contain the following information: (a) the applicant's name and business address	Applicants Name: Canadian Nuclear Laboratories Ltd. Business address: Chalk River Laboratories 286 Plant Road Chalk River, Ontario K0J 1J0 Contact Person, Signing Authority and Site Licence Holder: Allan Caron Director, End-State Strategy & Site Licence Holder Canadian Nuclear Laboratories Ltd. Whiteshell Laboratories 1 Ara Mooradian Way Pinawa, Manitoba, R0E 1L0 Phone: 204-266-2588 <u>Official Language of Application:</u> English	N/A
3(1)	(b) the activity to be licensed and its purpose	CNL intends to conduct the following activities, which are currently permitted pursuant to Whiteshell Laboratories (WL) licence [2] and WL Licence Conditions Handbook (LCH) [3]: • Operate or decommission, wholly or in part, any facility/building at WL. • Carry out site preparation, construction, or construction modification, or undertakings that are required for, associated with, or arise from the conduct of licensed activities at WL. • Construct, modify or abandon any facility/building at WL.	<i>WL Transportation Security Plan</i> [4] <i>Supplemental Information</i> [1] Section 1.4

WL 2027 Licence Renewal Application

Information pursuant to the *Nuclear Safety and Control Act* – Enclosure 1

WLD-508760-160-000 Rev 1. 2026 July

Page 2 of 55

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
		• Transition from operation to an extended or permanent safe shutdown state any facility/building at WL, or any parts thereof. • Maintain in safe shutdown state (extended or permanent) any facility/building at WL, or any parts thereof. • Transition from operation or from safe shutdown state to decommissioning any facility/building at WL, or any parts thereof. • Decommission/demolish any facility/building at WL, or any parts thereof. • Release any decommissioned/demolished facility/building from CNSC regulatory control. • produce, possess, process, refine, transfer, use, package, manage, and store the nuclear substances, • possess, use, produce and transfer prescribed equipment, • possess, use and transfer prescribed information, CNL also requests authorization to transport, by road and within the confines of the WL site, irradiated and non-irradiated materials as described in the WL Transportation Security Plan [4]. Refer to Attachment B of the licence renewal application [1] for details on this administrative change.	
3(1)	(c) the name, maximum quantity and form of any nuclear substance to be encompassed by the licence	Nuclear substances in solid, liquid, and gaseous forms are in use at WL. Limitations on the maximum quantities of nuclear substances permitted on the WL site are specified in: • Facility-specific safety analysis reports for nuclear facilities; • Operating Envelope documents for the radioisotope laboratories;	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
		- Detailed Decommissioning Plans; - Criticality Safety Documents; - Specific procedures governing the use, handling and storage of nuclear substances. Current versions of the aforementioned documents are referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	
3(1)	(d) a description of any nuclear facility, prescribed equipment or prescribed information to be encompassed by the licence	Relevant information on the nuclear facilities and prescribed equipment is presented in the CNL safety analysis reports (SARs) for the following WL facilities: Concrete Canister Storage Facility, Shielded Facilities, and Waste Management Area. The information for WR-1 can be found in <i>Storage with Surveillance (SwS) Plan for Whiteshell Laboratories Building 100 –Whiteshell Reactor 1</i> [6]. The SARs as well as SwS plan are referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5]. Any specific required information that may be prescribed information will be provided to the Commission under separate cover.	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]
3(1)	(e) the proposed measures to ensure compliance with the <i>Radiation Protection Regulations</i> , the <i>Nuclear Security Regulations</i> and the <i>Packaging and Transport of Nuclear Substances Regulations</i> , 2015	CNL proposes to maintain the existing compliance measures. Measures to ensure compliance with the Radiation Protection Regulations [7] at WL are implemented by the following Functional Support Areas (FSAs): Radiation Protection FSA, through the documents referenced in Safety and Control Area (SCA) – Radiation Protection, Licence Condition 7.1 of the current WL LCH [3], and	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1]: Section 3.7 Section 3.9

WL 2027 Licence Renewal Application

Information pursuant to the *Nuclear Safety and Control Act* – Enclosure 1

WLD-508760-160-000 Rev 1. 2026 July

Page 4 of 55

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
		Environmental Protection FSA, through the documents referenced in SCA – Environmental Protection, Licence Condition 9.1 of the current WL LCH [3]. Measures to ensure compliance with the <i>Nuclear Security Regulations</i> [8] at WL are implemented by the CNL Security FSA and the CNL Nuclear Cyber Security FSA, through the documents referenced in SCA – Security, Licence Condition 12.1 of the current WL LCH [3]. Measures to ensure compliance with the <i>Packaging and Transport of Nuclear Substances Regulations</i> [9] at WL are implemented by the Transportation of Dangerous Goods FSA, through the documents referenced in SCA – Packaging and Transport, Licence Condition 14.1 of the current WL LCH [3]. The aforementioned FSAs are described in the respective FSA description documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	Section 3.12 Section 3.14

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
3(1)	(f) any proposed action level for the purpose of section 6 of the <i>Radiation Protection Regulations</i>	CNL proposes to maintain the existing action levels. Radiation Protection action levels at WL are defined under the Radiation Protection FSA, through the <i>Radiation Protection Action Levels</i>, document [10] referenced in SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. Radioactive effluent and emission action levels at WL are defined under the Environmental Protection FSA through the <i>Administrative Levels and Action Levels for WL Air and Liquid Radioactive Effluent</i> document [11] referenced in SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3].	<i>Radiation Protection Action Levels</i> [10] <i>Administrative Levels and Action Levels for WL Air and Liquid Radioactive Effluent</i> [11] <i>Supplemental Information</i> [1]: Section 3.7 Section 3.9
3(1)	(g) the proposed measures to control access to the site of the activity to be licensed and the nuclear substance, prescribed equipment or prescribed information (h) the proposed measures to prevent loss or illegal use, possession or removal of the nuclear substance, prescribed equipment or prescribed information	CNL proposes to maintain the existing measures for purposes of Sections 3(1)(g) and (h). Measures to ensure compliance with the <i>Nuclear Security Regulations</i> [8] at WL are implemented by the CNL Security FSA and the CNL Nuclear Cyber Security FSA, through the documents referenced in SCA – Security, Licence Condition 12.1 of the current WL LCH [3]. The Security and Nuclear Cyber Security FSAs are described in the respective Program Description Documents, which are referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.12

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
3(1)	(i) a description and the results of any test, analysis or calculation performed to substantiate the information included in the application;	No tests, analyses or calculations were performed specifically to substantiate the information contained in this application. WL is an existing operating facility, subject to the terms and conditions of the existing licence and all applicable laws. The documents included within the <i>Licensing Basis List for Whiteshell Laboratories</i> [5], contain the tests, analyses and calculations to which the WL site operates.	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]
3(1)	(j) the name, quantity, form, origin and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, including waste that may be stored, managed, processed or disposed of at the site of the activity to be licensed, and the proposed method for managing and disposing of that waste;	Specific information on radioactive and hazardous wastes at WL is reported annually in the WL Annual Compliance Monitoring Report [12] to meet the requirement of SCA – Operating Performance, Licence Condition 3.2 of the current WL LCH [3]. The <i>2025 Annual Compliance Monitoring Report for WL</i> [12] is enclosed with this application. Relevant requirements for managing and disposing of radioactive and hazardous waste at the WL site are addressed in the Waste Management FSA through the documents referenced in SCA – Waste Management, Licence Condition 11.1 of the current WL LCH [3]. The Waste Management FSA is described in the Program Description Document. The information on the waste that may result from decommissioning activities are presented in the WL site's Detailed Decommissioning Plans (DDPs). The Program Description Documents and DDPs are referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Whiteshell Laboratories Annual Compliance Monitoring Report for 2025</i> [12] <i>Licensing Basis List for Whiteshell Laboratories</i> [5]

WL 2027 Licence Renewal Application

Information pursuant to the *Nuclear Safety and Control Act* – Enclosure 1

WLD-508760-160-000 Rev 1. 2026 July

Page 7 of 55

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
3(1)	(k) the applicant's organizational management structure insofar as it may bear on the applicant's compliance with the Act and the regulations made under the Act, including the internal allocation of functions, responsibilities and authority;	CNL's organizational management structure will not change as a result of the requested licence renewal. CNL's senior management organizational structure for the operation of WL is documented in the <i>Management System Manual</i> [13] which also defines functions, responsibilities, and authorities. Further relevant information regarding responsibilities and authority at the WL site is provided in <i>Designated Representatives of the Licensee, Site Licences, Certificates & Permits</i> [14].	<i>CNL Management System Manual</i> [13], <i>Designated Representatives of the Licensee, Site Licences, Certificates & Permits</i> [14] <i>Supplemental Information</i> [1] Section 3.1.3
3(1)	(l) a description of any proposed financial guarantee relating to the activity to be licensed; and	Atomic Energy of Canada Limited (AECL) owns assets and liabilities that CNL has been contracted to manage and operate. AECL is a federal Crown corporation and agent of the Government of Canada. AECL's liabilities are ultimately liabilities of the Government of Canada, which was confirmed by the Minister of Natural Resources in a letter dated 2015 July 31 [15] accepted by CNSC staff most recently in 2025 [16].	Letter, G. Rickford (NRCan) to M. Binder (CNSC) [15] Letter, N. Greencorn (CNSC) and S. Watt (CNSC) to A. Tisler (CNL) [16]
3(1)	(m) any other information required by the Act or the regulations made under the Act for the activity to be licensed and the nuclear substance, nuclear facility, prescribed equipment or prescribed information to be encompassed by the licence.	Information required to be provided at the time of the application is incorporated throughout the entirety of the application.	N/A

WL 2027 Licence Renewal Application

Information pursuant to the *Nuclear Safety and Control Act* – Enclosure 1

WLD-508760-160-000 Rev 1. 2026 July

Page 8 of 55

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
5	An application for the renewal of a licence shall contain: (a) The information required to be contained in an application for that licence by the applicable regulations made under the Act	This application includes all information required by the applicable regulations made under the <i>Nuclear Safety and Control Act</i> [17].	N/A
5	(b) a statement identifying the changes in the information that was previously submitted.	CNL will maintain its current scope of authorized activities into the next licence, ensuring stable and reliable capabilities throughout the next licensing period. No new authorized activities are being requested. CNL has established processes for implementing programmatic changes and notifies CNSC staff of these changes as required. Two administrative changes are being requested to the WL licence [2] and LCH [3] as described in Attachments B and C of the licence application submission.	N/A

Section	Requirement	CNL Response	Document Enclosed
General Nuclear Safety and Control Regulations			
15	Every applicant for a licence and every licensee shall notify the Commission of: (a) the persons who have authority to act for them in their dealings with the Commission	The persons with authority to act on behalf of CNL in dealings with the Commission are documented in <i>Designated Representatives of the Licensee, Site Licenses, Certificates & Permits</i> [14].	<i>Designated Representatives of the Licensee, Site Licenses, Certificates & Permits</i> [14]
15	(b) the names and position titles of the persons who are responsible for the management and control of the licensed activity and the nuclear substance, nuclear facility, prescribed equipment or prescribed information encompassed by the licence	The names and position titles of the responsible personnel are documented in <i>Designated Representatives of the Licensee, Site Licenses, Certificates & Permits</i> [14].	<i>Designated Representatives of the Licensee, Site Licenses, Certificates & Permits</i> [14]

Table 2 - Class I Nuclear Facilities Regulations [18]

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
3	An application for a licence in respect of a Class I nuclear facility, other than a licence to abandon, shall contain the following information in addition to the information required by section 3 of the <i>General Nuclear Safety and Control Regulations</i>: (a) a description of the site of the activity to be licensed, including the location of any exclusion zone and any structures within that zone;	This information is documented in the <i>WL Detailed Decommissioning Plan, Volume 1 – Program Overview</i> [19] and <i>TITLE REPORT for Atomic Energy of Canada Ltd. Plant Site Lands</i> [20].	<i>WL Detailed Decommission Plan, Volume 1 – Program Overview</i> [19]. <i>TITLE REPORT for Atomic Energy of Canada Ltd. Plant Site Lands</i> [20]
3	(b) plans showing the location, perimeter, areas, structures and systems of the nuclear facility;	Relevant information for the Class I nuclear facilities is provided in the annual reports prepared to meet the requirement of SCA – Operating Performance, Licence Condition 3.2 of the current WL LCH [3], and in the SARs for the following WL facilities: Concrete Canister Storage Facility, Shielded Facilities, and Waste Management Area. The information for WR-1 can be found in <i>Storage with Surveillance (SwS) Plan for Whiteshell Laboratories Building 100 –Whiteshell Reactor 1</i> [6]. The SARs as well as SwS plan are referenced in SCA – Safety Analysis, Licence Condition 4.1 and Decommissioning Plan, Licence Condition 11.2 of the current WL LCH [3]. Current versions of the SARs and SwS Plan are listed in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
3	(c) evidence that the applicant is the owner of the site or has authority from the owner of the site to carry on the activity to be licensed;	AECL has engaged CNL to manage and operate its sites and projects, including the WL site [21]	Letter, G. Williamson (AECL) to D. Carr (CNL) [21] <i>Supplemental Information</i> [1] Section 1.2
3	(d) the proposed management system for the activity to be licensed, including measures to promote and support safety culture;	CNL is proposing to utilize the existing Management System for the licenced activities. CNL's Management System is documented in the <i>CNL Management System Manual</i> [13] and lower tier documents through the documents referenced in SCA – Management System, Licence Condition 1.1 of the current WL LCH [3]. The Management System covers a breadth of areas, including, but not limited to, measures to promote and support a safety culture.	<i>CNL Management System Manual</i> [13] <i>Supplemental Information</i> [1] Section 3.1

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
3	(d.1) the proposed human performance program for the activity to be licensed, including measures to ensure workers' fitness for duty.	CNL is proposing to utilize the existing human performance program. Human performance at WL is implemented by the Performance Assurance FSA through the documents referenced in SCA – Human Performance Management, Licence Condition 2.1: Human Performance FSA of the WL LCH [3]. The Performance Assurance FSA is described in a Program Description Document, which is referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5]. Workers' fitness for duty measures, including hours of work and fatigue management, are implemented through the Fitness for Duty Standards [22][23].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Fitness for Duty</i> [22], <i>Fitness for Duty: Policy on Managing Alcohol and Drug Use</i> [23] <i>Supplemental Information</i> [1] Section 3.2
3	(e) the name, form, characteristics and quantity of any hazardous substances that may be on the site while the activity to be licensed is carried on;	Comprehensive information on name, form, characteristics and quantity of hazardous substances present at WL is described in the following documents: • Facility-specific chemical inventories, which summarize the name, form, and quantity of chemicals stored and used in WL licensed facilities. • Safety Data Sheets, which are available for all hazardous substances in use across WL and provide detailed information on their characteristics. • Detailed Decommissioning Plans. • SARs for the following WL facilities: Concrete Canister Storage Facility, Shielded Facilities, and Waste Management Area.	N/A

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
3	(f) the proposed worker health and safety policies and procedures;	CNL is proposing to utilize the existing worker health and safety policies and procedures. Worker health and safety at WL is implemented by the: • CNL Occupational Safety and Health and Electrical Safety FSAs, through the documents referenced in SCA – Conventional Health and Safety, Licence Condition 8.1 of the WL LCH [3]. • CNL Safety and Health Policy [24]. The Occupational Safety and Health and Electrical Safety FSAs are described in Program Description Documents which are referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Safety and Health</i> [24] <i>Supplemental Information</i> [1] Section 3.8
3	(g) the proposed environmental protection policies and procedures;	CNL is proposing to utilize the existing environmental protection policies and procedures. Environmental protection at WL is implemented by the: • CNL Environmental Protection FSA, through the documents referenced in SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3]. • CNL Environment Policy [25]. The Environmental Protection FSA is described in Program Description Documents, which are referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Environment</i> [25] <i>Supplemental Information</i> [1] Section 3.9

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
3	(h) the proposed effluent and environmental monitoring programs;	CNL is proposing to utilize the existing effluent and environmental monitoring programs. Effluent and environmental monitoring is implemented by the CNL Environmental Protection FSA through the documents referenced in SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3], specifically: • <i>WL Effluent Verification Monitoring Plan</i> [26], and • <i>Whiteshell Laboratories Environmental Monitoring Plan</i> [27].	<i>WL Effluent Verification Monitoring Plan</i> [26], <i>Whiteshell Laboratories Environmental Monitoring</i> [27].
3	(i) if the application is in respect of a nuclear facility referred to in paragraph 3(b) of the <i>Nuclear Security Regulations</i> , the information and documents required by sections 4 and 27 of those Regulations;	See responses below.	N/A

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
3	(j) the proposed program to inform persons living in the vicinity of the site of the general nature and characteristics of the anticipated effects on the environment and the health and safety of persons that may result from the activity to be licensed; and	CNL is proposing to utilize the existing programs for purposes of Section 3(j). Notification to local residents and associated activities is implemented by the: • CNL Public Information Program [28], through the documents referenced in Licence Condition G.4 of the current WL LCH [3]. • Emergency Preparedness Program, through the documents referenced in SCA – Emergency Management and Fire Protection, Licence Condition 10.1 of the current WL LCH [3]. The Emergency Preparedness FSA is described in a Program Description Document which is referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Public Information Program for CNL</i> [28] <i>Supplemental Information</i> [1] Section 1.5 Section 3.10
3	(k) the proposed plan for the decommissioning of the nuclear facility or of the site.	CNL is proposing to utilize the existing decommissioning plans for the WL site. The plan for the decommissioning of the site is captured in the <i>WL Detailed Decommissioning Plan, Volume 1 – Program Overview</i> [19] and DDP Volumes 2 through 12 as documented in [19].	<i>WL Detailed Decommission Plan, Volume 1 – Program Overview</i> [19].
4	An application for a licence to prepare a site for a Class I nuclear facility shall contain the following information in addition to the information required by Section 3: (a) description of the site evaluation process and of the investigations and preparatory work that have	Any consideration to prepare a site for a Class I facility will be evaluated through a licensing basis assessment. The licensing basis assessment is required to be submitted to CNSC staff for review and concurrence on CNL's LBA determination. CNSC staff will review the information submitted by CNL to independently determine if the proposed activity remains within the licensing basis. If the activity is determined to be within the licensing basis, a licensing plan will be submitted to CNSC staff and CNL will use	N/A

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
	been and will be done on the site and in the surrounding area; (b) a description of the site's susceptibility to human activity and natural phenomena, including seismic events, tornadoes and floods; (c) the proposed program to determine the environmental baseline characteristics of the site and the surrounding area; (d) the proposed quality assurance program for the design of the nuclear facility; and (e) the effects on the environment and the health and safety of persons that may result from the activity to be licensed, and the measures that will be taken to prevent or mitigate those effects.	existing programs to ensure that all applicable requirements are met. If the activity is determined to be outside of the licensing basis, a licence amendment will be sought, as required.	
5	An application for a licence to construct a Class I nuclear facility shall contain the following information in addition to the information required by Section 3:	Any consideration to construct a Class I facility will be evaluated through a licensing basis assessment. The licensing basis assessment is required to be submitted to CNSC staff for review and concurrence on CNL's LBA determination. CNSC staff will review the information submitted by CNL to independently determine if the proposed activity remains within the licensing basis.	N/A

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
	(a) a description of the proposed design of the nuclear facility, including the manner in which the physical and environmental characteristics of the site are taken into account in the design; (b) a description of the environmental baseline characteristics of the site and the surrounding area; (c) the proposed construction program, including its schedule; (d) a description of the structures proposed to be built as part of the nuclear facility, including their design and their design characteristics; (e) a description of the systems and equipment proposed to be installed at the nuclear facility, including their design and their design operating conditions; (f) a preliminary safety analysis report demonstrating the adequacy of the design of the nuclear facility;	If the activity is determined to be within the licensing basis, a licensing plan will be submitted to CNSC staff and CNL will use existing programs to ensure that all applicable requirements are met. If the activity is determined to be outside of the licensing basis, a licence amendment will be sought, as required.	

WL 2027 Licence Renewal Application

Information pursuant to the *Nuclear Safety and Control Act* – Enclosure 1

WLD-508760-160-000 Rev 1. 2026 July

Page 18 of 55

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
	(g) the proposed quality assurance program for the design of the nuclear facility; (h) the proposed measures to facilitate Canada's compliance with any applicable safeguards agreement; (i) the effects on the environment and the health and safety of persons that may result from the construction, operation and decommissioning of the nuclear facility, and the measures that will be taken to prevent or mitigate those effects; (j) the proposed location of points of release, the proposed maximum quantities and concentrations, and the anticipated volume and flow rate of releases of nuclear substances and hazardous substances into the environment, including their physical, chemical and radiological characteristics; (k) the proposed measures to control releases of nuclear		

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
	substances and hazardous substances into the environment; (l) the proposed program and schedule for recruiting, training and qualifying workers in respect of the operation and maintenance of the nuclear facility; and (m) a description of any proposed full-scope training simulator for the nuclear facility.		
6	An application for a licence to operate a Class I nuclear facility shall contain the following information in addition to the information required by Section 3: (a) a description of the structures at the nuclear facility, including their design and their design operating conditions; (b) a description of the systems and equipment at the nuclear facility, including their design and their design operating conditions;	Relevant information on the Class I nuclear facilities structures, systems and equipment, their design, and design operating conditions, can be found in the safety analysis reports for the following WL facilities: Concrete Canister Storage Facility, Shielded Facilities, and Waste Management Area (through the documents referenced in SCA - Safety Analysis, Licence Condition 4.1 of the current WL LCH [3]). Current versions of the safety analysis reports are referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
6	(c) a final safety analysis report demonstrating the adequacy of the design of the nuclear facility;	Relevant information demonstrating the adequacy of the design of the Class I nuclear facilities can be found in the safety analysis reports for the following WL facilities: Concrete Canister Storage Facility, Shielded Facilities, and Waste Management Area (through the documents referenced in SCA – Safety Analysis, Licence Condition 4.1 of the current WL LCH [3]). Current versions of the safety analysis reports are referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]
6	(d) the proposed measures, policies, methods, and procedures for operating and maintaining the nuclear facility;	CNL is proposing to utilize the existing measures, policies, methods and procedures for the purposes of Section 6(d). The measures, policies, methods, and procedures for operating the nuclear facilities at WL are defined and implemented through the documents listed in SCA – Operating Performance, Licence Condition 3.1 of the WL LCH [3], including individual facility authorization documents. The measures, policies, methods, and procedures for maintaining the nuclear facilities at WL are defined by the CNL Fitness for Service FSA and implemented through the documents listed in SCA – Fitness for Service, Licence Condition 6.1 of the WL LCH [3]. The aforementioned FSA is described in the respective Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.3 Section 3.6
6	(e) the proposed procedures for handling, storing, loading, and	CNL is proposing to utilize the existing procedures for the purposes of Section 6(e).	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
	transporting nuclear substances and hazardous substances;	The procedures for handling, storing, loading, and transporting nuclear and hazardous substances are defined by the: • CNL Transportation of Dangerous Good FSA and implemented through the documents listed in SCA – Packaging and Transport, Licence Condition 14.1 of the WL LCH [3]. • CNL Nuclear Materials and Safeguards Management FSA and implemented through the documents listed in SCA – Safeguards and Non-Proliferation, Licence Condition 13.1 of the WL LCH [3]. • CNL Radiation Protection FSA and implemented through the documents listed in SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. • CNL Occupational Safety and Health FSA and implemented through the documents listed in SCA – Conventional Health and Safety, Licence Condition 8.1 of the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Supplemental Information</i> [1] Section 3.14 Section 3.13 Section 3.7 Section 3.8
6	(f) the proposed measures to facilitate Canada's compliance with any applicable safeguards agreement;	CNL is proposing to utilize existing measures to facilitate Canada's compliance with applicable safeguards agreements. Canadian safeguards agreements are implemented by the Nuclear Materials and Safeguards Management FSA through the documents listed in SCA – Safeguards and Non-Proliferation, Licence Condition 13.1 of the WL LCH [3].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.13

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
		The Nuclear Materials and Safeguards Management FSA is described in a Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	
6	(g) the proposed commissioning program for the systems and equipment that will be used at the nuclear facility;	CNL is proposing to utilize the existing commissioning program for the systems and equipment that will be used at WL. Commissioning is implemented by the Commissioning FSA in accordance with SCA – Operating Performance, Licence Condition 3.1 of the WL LCH [3]. The Commissioning FSA is described in a Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]
6	(h) the effects on the environment and the health and safety of persons that may result from the operation and decommissioning of the nuclear facility, and the measures that will be taken to prevent or mitigate those effects;	CNL will continue to monitor, measure and mitigate the potential effects of its operations and decommissioning on the environment and health and safety of persons using existing programs. The measures to be taken to prevent or mitigate effects on the environment and health and safety of persons at CRL are implemented by the: • CNL Environmental Protection FSA as per SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3]. • CNL Occupational Safety and Health and Electrical Safety FSAs as per SCA – Conventional Health and Safety, Licence Condition 8.1 of the WL LCH [3]. • CNL Radiation Protection FSA as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.9 Section 3.8 Section 3.7

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
		The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	
6	(i) the proposed location of points of release, the proposed maximum quantities and concentrations, and the anticipated volume and flow rate of releases of nuclear substances and hazardous substances into the environment, including their physical, chemical and radiological characteristics;	Relevant information is provided in the <i>WL Effluent Verification Monitoring Plan</i> [26]	<i>WL Effluent Verification Monitoring Plan</i> [26]
6	(j) the proposed measures to control releases of nuclear substances and hazardous substances into the environment;	CNL is proposing to utilize existing measures to control releases of nuclear and hazardous substances into the environment. Environmental protection at WL is implemented by the CNL Environmental Protection FSA as per SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3]. The Environmental Protection FSA is described in a Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.9.2
6	(k) the proposed measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment,	CNL is proposing to utilize the existing measures for the purposes of Section 6(k). The measures to mitigate or prevent the effects of accidental releases are implemented by the following CNL FSAs:	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
	the health and safety of persons and the maintenance of national security, including measures to: i. assist off-site authorities in planning and preparing to limit the effects of an accidental release, ii. notify off-site authorities of an accidental release or the imminence of an accidental release, iii. report information to off-site authorities during and after an accidental release, iv. assist off-site authorities in dealing with the effects of an accidental release, and v. test the implementation of the measures to prevent or mitigate the effects of an accidental release;"	• Environmental Protection, through the documents referenced in SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3]. • Emergency Preparedness, through the documents referenced in SCA – Emergency Management Fire Protection, Licence Condition 10.1 of the WL LCH [3]. • Radiation Protection, through the documents referenced in SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Supplemental Information</i> [1] Section 3.9 Section 3.10 Section 3.7
6	(I) the proposed measures to prevent acts of sabotage or attempted sabotage at the nuclear facility, including	CNL is proposing to utilize the existing measures to prevent acts of sabotage or attempted sabotage at WL.	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
	measures to alert the licensee to such acts;	Security at CNL is implemented by the CNL Security FSA and Nuclear Cyber Security FSA, through the documents referenced under SCA – Security, Licence Condition 12.1 of the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Supplemental Information</i> [1] Section 3.12
6	(m) the proposed responsibilities of and qualification requirements and training program for workers, including the procedures for the requalification of workers; and (n) the results that have been achieved in implementing the program for recruiting, training and qualifying workers in respect of the operation and maintenance of the nuclear facility.	CNL is proposing to utilize the existing programs and procedures for the purposes of Section 6(m) and (n). Training and qualification of personnel at WL is ensured through implementation of the Training and Development FSA, through the documents referenced in SCA – Human Performance Management, Licence Condition 2.2 of the WL LCH [3]. The Training and Development FSA is described in a Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5]. Some positions and roles at CNL require a fully implemented and formally governed Systematic Approach to Training (SAT) program. These positions and roles are identified in the <i>Application of the Systematic Approach to Training (SAT) at CNL</i> list, which is also referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.2.3
7	An application for a licence to decommission a Class I nuclear facility shall contain the following information in addition to the information required by section 3:	The proposed plan for the decommissioning of the WL site is captured in the <i>WL Detailed Decommissioning Plan, Volume 1 – Program Overview</i> [19] and DDP Volumes 2 through 12 as documented in [19].	<i>WL Detailed Decommission Plan, Volume 1 – Program Overview</i> [19]

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
	(a) a description of and the proposed schedule for the decommissioning, including the proposed starting date and the expected completion date of the decommissioning and the rationale for the schedule; (b) the nuclear substances, hazardous substances, land, buildings, structures, systems and equipment that will be affected by the decommissioning; (c) the proposed measures, methods and procedures for carrying on the decommissioning;		
7	(d) the proposed measures to facilitate Canada's compliance with any applicable safeguards agreement;	CNL is proposing to utilize existing measures to facilitate Canada's compliance with applicable safeguards agreements. Canadian safeguards agreements are implemented by the Nuclear Materials and Safeguards Management FSA through the documents listed in SCA – Safeguards and Non-Proliferation, Licence Condition 13.1 of the WL LCH [3]. The Nuclear Materials and Safeguards Management FSA is described in a Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.13

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
7	(e) the nature and extent of any radioactive contamination at the nuclear facility;	This information is provided in the <i>WL Detailed Decommissioning Plan, Volume 1 – Program Overview</i> [19].	<i>WL Detailed Decommission Plan, Volume 1 – Program Overview</i> [19]
7	(f) the effects on the environment and the health and safety of persons that may result from the decommissioning, and the measures that will be taken to prevent or mitigate those effects;	Information regarding the effects on the environment and the health and safety of persons that may result from the decommissioning is provided in the <i>Comprehensive Study Report on the Decommissioning of Whiteshell Laboratories</i> [29]. The measures that will be taken to prevent mitigate these effects are described within the Environmental Protection FSA, through the documents referenced in SCA – Environmental Protection, Licence Condition 9.1 of the current WL LCH [3], and within the Occupational Safety and Health FSA, through the documents referenced in SCA – Conventional Health and Safety, Licence Condition 8.1 of the current WL LCH [3]. The Environmental Protection and Occupational Safety and Health FSAs are described in Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Comprehensive Study Report</i> [29] <i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
7	(g) the proposed location of points of release, the proposed maximum quantities and concentrations, and the anticipated volume and flow rate of releases of nuclear substances and hazardous substances into the environment, including their physical, chemical and radiological characteristics;	Relevant information is provided in the <i>WL Effluent Verification Monitoring Plan</i> [26].	<i>WL Effluent Verification Monitoring Plan</i> [26]
7	(h) the proposed measures to control releases of nuclear substances and hazardous substances into the environment;	CNL is proposing to utilize the existing measures to control releases of nuclear and hazardous substances into the environment. Environmental protection at WL is implemented by the Environmental Protection FSA, through the documents referenced in SCA – Environmental Protection, Licence Condition 9.1 of the current WL LCH [3]. The Environmental Protection FSA is described in a Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.9

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
7	(i) the proposed measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment, the health and safety of persons and the maintenance of national security, including an emergency response plan;	CNL is proposing to utilize the existing measures for the purposes of Section 7(i). Mitigating the effects of accidental releases is implemented by the following CNL FSAs: • Environmental Protection FSA, through the documents referenced in SCA – Environmental Protection, Licence Condition 9.1 of the current WL LCH [3]. • Emergency Preparedness FSA, through the documents referenced in SCA – Emergency Management and Fire Protection, Licence Condition 10.1 of the current WL LCH [3]. • Radiation Protection, through the documents referenced in SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.9 Section 3.10 Section 3.7

WL 2027 Licence Renewal Application

Information pursuant to the *Nuclear Safety and Control Act* – Enclosure 1

WLD-508760-160-000 Rev 1. 2026 July

Page 30 of 55

Section	Requirement	CNL Response	Document Enclosed
Class I Nuclear Facilities Regulations			
7	(j) the proposed qualification requirements and training program for workers; and	CNL is proposing to utilize existing programs for the purposes of Section 7(j). Training and qualification of personnel at WL implemented by the Training and Development FSA, through the documents reference in SCA – Human Performance Management, Licence Condition 2.2 of the WL LCH [3]. The Training and Development FSA is described in a Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5]. Some positions and roles at CNL require a fully implemented and formally governed Systematic Approach to Training (SAT) program. These positions and roles are identified in the <i>Application of the Systematic Approach to Training (SAT) at CNL</i> list, which is also referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.2.3
7	(k) a description of the planned state of the site on completion of the decommissioning.	CNL plans to decommission all of WL to its final end-state as documented in the <i>WL Detailed Decommissioning Plan, Volume 1 – Program Overview</i> [19].	<i>WL Detailed Decommission Plan, Volume 1 – Program Overview</i> [19]

Table 3 - Nuclear Substances and Radiation Devices Regulations [30]

Section	Requirement	CNL Response	Document Enclosed
Nuclear Substances and Radiation Devices Regulations			
3(1)	An application for a licence in respect of a nuclear substance or a radiation device, other than a licence to service a radiation device, shall contain the following information in addition to the information required by Section 3 of the <i>General Nuclear Safety and Control Regulations</i>: (a) the methods, procedures and equipment that will be used to carry on the activity to be licensed;	CNL is proposing to utilize the existing methods, procedures, and equipment for the purposes of Section 3(1)(a). CNL manages the handling of nuclear substances and the operation of radiation devices in compliance with requirements under the following CNL FSAs: • Radiation Protection, through the documents referenced in SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. • Conduct of Operations, through the documents referenced in SCA – Operating Performance, Licence Condition 3.1 of the WL LCH [3]. • Nuclear Materials and Safeguards Management, through the documents referenced in SCA – Safeguards and Non-Proliferation, Licence Condition 13.1 of the WL LCH [3]. • Transportation of Dangerous Goods, through the documents referenced in SCA – Packaging and Transport, Licence Condition 14.1 of the WL LCH [3]. • Environmental Protection, through the documents referenced in SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.7 Section 3.3 Section 3.13 Section 3.14 Section 3.9

Section	Requirement	CNL Response	Document Enclosed
Nuclear Substances and Radiation Devices Regulations			
3(1)	(b) the methods, procedures and equipment that will be used while carrying on the activity to be licensed, or during and following an accident, to i. monitor the release of any radioactive nuclear substance from the site of the activity to be licensed, ii. detect the presence of and record the radiation dose rate and quantity in becquerels of radioactive nuclear substances at the site of the activity to be licensed, iii. limit the spread of radioactive contamination within and from the site of the activity to be licensed, and iv. decontaminate any person, site or equipment contaminated as a result of the activity to be licensed;	CNL is proposing to utilize the existing methods, procedures, and equipment for the purposes of Section 3(1)(b). Post-accident recovery is implemented by the Emergency Preparedness FSA as per SCA – Emergency Management and Fire Protection, Licence Condition 10.1 of the WL LCH [3]. Monitoring releases of radioactive nuclear substances from the site is implemented by the Environmental Protection FSA as per SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3]. Monitoring radioactive contamination and conducting decontamination is implemented by the Radiation Protection FSA as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.10 Section 3.9 Section 3.7

Section	Requirement	CNL Response	Document Enclosed
Nuclear Substances and Radiation Devices Regulations			
3(1)	(c) a description of the circumstances in which the decontamination referred to in subparagraph (b)(iv) will be carried out;	Levels at which decontamination of persons or equipment is required are listed in <i>Radiation Levels and Limits</i> [31] document, which is maintained by the Radiation Protection FSA as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. The Radiation Protection FSA is described in the respective Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Radiation Levels and Limits</i> [31] <i>Licensing Basis List for Whiteshell Laboratories</i> [5]
3(1)	(d) the proposed location of the activity to be licensed, including a description of the site;	This information is available in the <i>WL Detailed Decommissioning Plan, Volume 1 – Program Overview</i> [19].	<i>WL Detailed Decommissioning Plan, Volume 1 – Program Overview</i> [19]
3(1)	(e) the roles, responsibilities, duties, qualifications, and experience of workers;	Specific and generic position descriptions exist within each facility and laboratory located at the WL site to define roles, responsibilities (duties) and qualification requirements for personnel. Training plans are established accordingly based on these defined requirements.	N/A
3(1)	(f) the proposed training program for workers;	CNL proposes to utilize the existing training program for workers. Training and qualification of personnel at WL is implemented by the Training and Development FSA, through the documents referenced in SCA – Human Performance Management, Licence Condition 2.2 of the WL LCH [3].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.2.3

Section	Requirement	CNL Response	Document Enclosed
Nuclear Substances and Radiation Devices Regulations			
		The Training and Development FSA is described in the Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	
3(1)	(g) the proposed instructions for dealing with accidents, including fires and spills, in which the nuclear substance may be involved;	CNL proposes to utilize existing instructions for this item. Procedures in the event of accidents, including fires and spills, are implemented by the following FSAs: • Emergency Preparedness, as per SCA – Emergency Management and Fire Protection, Licence Condition 10.1 of the WL LCH [3]. • Radiation Protection, as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. • Environmental Protection, as per SCA – Environmental Protection, Licence Condition 9.1 of the WL LCH [3]. • Transportation of Dangerous Goods, as per SCA – Packaging and Transport, Licence Condition 14.1 of the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.10 Section 3.7 Section 3.9 Section 3.14
3(1)	(h) the proposed inspection program for the equipment and systems that will be used to carry on the activity to be licensed	CNL proposes to utilize existing inspection programs for the equipment and systems carrying on licenced activities. These are implemented by the Fitness for Service FSA as per SCA – Fitness for Service, Licence Condition 6.1 of the WL LCH [3], and the Radiation Protection FSA as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Supplemental Information</i> [1] Section 3.6

Section	Requirement	CNL Response	Document Enclosed
Nuclear Substances and Radiation Devices Regulations			
		The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	
3(1)	(i) the methods, procedures and equipment that will be used to calibrate radiation survey meters in accordance with these Regulations;	CNL will utilize existing methods and procedures and equipment. These are implemented by the Radiation Protection FSA as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. The Radiation Protection FSA is described in the respective Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]
3(1)	(j) the methods, procedures and equipment that will be used to calibrate and verify the calibration of dosimeters referred to in paragraphs 30(3)(d) and (e).	CNL will utilize existing methods and procedures and equipment. These are implemented by the Radiation Protection FSA as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. The Radiation Protection FSA is described in the respective Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]
3(1)	(k) the methods, procedures and equipment that will be used to conduct the leak tests and surveys required by these Regulations;	CNL will utilize existing methods and procedures and equipment. These are implemented by the Radiation Protection FSA as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. The Radiation Protection FSA is described in the respective Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]
3(1)	(l) where the application is in respect of a nuclear substance	The WL site contains existing laboratories and facilities that can accommodate unsealed sources.	<i>Licensing Basis List for Whiteshell</i>

Section	Requirement	CNL Response	Document Enclosed
Nuclear Substances and Radiation Devices Regulations			
	that is an unsealed source and that is to be used in a room, the proposed design of the room;	Relevant requirements regarding laboratory and facility design are ensured through implementation of the following CNL FSAs: • Radiation Protection as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. • Design Authority and Design Engineering as per SCA – Physical Design, Licence Condition 5.1 of the WL LCH [3]. • Safety Analysis as per SCA – Safety Analysis, Licence Condition 4.1 of the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Laboratories</i> [5]
3(1)	(m) if the application is in respect of a nuclear substance that is contained in a radiation device, the brand name and model number of the radiation device, and the quantity of the devices;	Relevant information regarding nuclear substances and radiation device at the WL site is maintained in a database by the Radiation Protection FSA as per SCA – Radiation Protection, Licence Condition 7.1 of the WL LCH [3]. The Radiation Protection FSA is described in the respective Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]
3(1)	(n) where the application is in respect of Category I, II or III nuclear material, as defined in Section 1 of the <i>Nuclear Security Regulations</i> ,	CNL proposes to implement existing measures to prevent nuclear criticality. These are implemented by the Nuclear Criticality Safety FSA as per SCA – Safety Analysis, Licence Condition 4.2 of the WL LCH [3]. The Nuclear Criticality Safety FSA is described in a Program Description Document referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Nuclear Substances and Radiation Devices Regulations			
	i. the measures that will be taken to prevent nuclear criticality, and ii. the information required by Section 4 of the <i>Nuclear Security Regulations</i> , and if applicable, section 27 of those Regulations;	See below for the information required by the <i>Nuclear Security Regulations</i> [8].	
3(1)	(o) if the applicant will be manufacturing or distributing radiation devices referred to in paragraph 5(1)(c) or section 6 or 7, or check sources mentioned in section 8.1, the proposed procedure for the disposal of each radiation device or check source or for its return to the manufacturer.	Not applicable.	N/A
4	An application for a licence to service a radiation device shall contain the following information in addition to the information required by section 3 of the <i>General Nuclear Safety and Control Regulations</i> : (a) the brand name and model number of the device or the	At present, servicing of radiation devices at WL is performed by qualified third-party service providers. Should a future operational need arise for servicing to be conducted by CNL (for example, in the event that a manufacturer or authorized service provider is no longer in operation), CNL has established programs under the Radiation Protection and Training and Development FSAs that would enable such activities to be undertaken. This would involve development and implementation of appropriate procedures, the	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Nuclear Substances and Radiation Devices Regulations			
	number of the certificate relating to the device; (b) a description of the nature of the servicing proposed to be carried on; (c) the proposed methods, procedures and equipment for carrying on the servicing; (d) the proposed qualification requirements and training program for workers; and (e) the proposed procedures to be followed after completion of the servicing to confirm that the device is safe to use.	provision of suitable tools and equipment, and the completion of required training and qualification of workers. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Whiteshell Laboratories</i> [5].	

Table 4 - Packaging and Transport of Nuclear Substances Regulations [9]

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
7	An application for a licence under Subsection 24(2) of the Act to transport a nuclear substance must contain: (a) the applicable information required by Section 3 of the <i>General Nuclear Safety and Control Regulations</i> ;	See above.	N/A
7	(b) the information required by section 100 of the <i>Nuclear Security Regulations</i> if the substance is a Category I nuclear material, Category II nuclear material or Category III nuclear material, as those terms are defined in section 1 of those Regulations;	See below.	N/A
7	(c) the name, postal address and telephone number of each consignor and consignee;	CNL is the consignor and consignee of all shipments of nuclear material within the WL site. Applicant's Name: Canadian Nuclear Laboratories Ltd. Business Address: Whiteshell Laboratories 1 Ara Mooradian Way	N/A

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
		Pinawa, Manitoba, ROE 1LO Telephone Number: 613-584-3311	
7	(d) if the nuclear substance is one of those referred to in paragraph 6(1)(b), i. a description of the nuclear substance, including the name, chemical form and physical state, the activity — or, in the case of fissile material, the mass — of each nuclear substance in a package and the total activity or mass in the consignment, ii. the country of origin of the nuclear substance, iii. the reason for selecting a route through Canada, iv. the name of each carrier, v. the dates, times and locations of its arrival into and departure from Canada and of any scheduled stop or transshipment in Canada,	Nuclear substances in various forms and physical states are transported within the boundaries of the WL site. These movements are conducted under established site-specific procedures and are controlled and secure. The <i>Whiteshell Laboratories Site Emergency Response Plan</i> [32] applies to on-site transportation involving radioactive material. The plan [32] is maintained by CNL's Emergency Preparedness FSA and is updated on a periodic basis, as required.	<i>Whiteshell Laboratories Site Emergency Response Plan</i> [32]

WL 2027 Licence Renewal Application

Information pursuant to the *Nuclear Safety and Control Act* – Enclosure 1

WLD-508760-160-000 Rev 1. 2026 July

Page 41 of 55

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
	vi. the number of the certificate or approval applicable to the package, vii. the number of packages to be transported, viii. the types of conveyance to be used during transit, ix. if a vessel is to be used as a conveyance during transit, the name of the vessel and its flag state, x. the United Nations number for the nuclear substance, and xi. the reference number of the emergency response assistance plan that is approved under Section 7 of the <i>Transportation of Dangerous Goods Act, 1992</i> or a reference to the effect that a plan is not required, as the case may be;		
7	(e) if the nuclear substance is contained in a large object,	Nuclear substances in various forms and physical states are transported within the boundaries of the WL site. These	N/A

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
	i. information that demonstrates that the internal contamination (A) is contained within the object and that all openings are sealed, (B) meets the requirements applicable to an SCO-I or SCO-II as set out in the IAEA Regulations, (C) is caused by a substance that is classified as non-fissile or fissile-excepted radioactive material, and (D) is caused by a substance that is in solid form and that any liquid content is negligible, ii. information that demonstrates that the large object (A) meets the free drop test requirements set out in the IAEA Regulations for the industrial package type referred to in section 27 for the SCO classification determined for the internal contamination,	movements are conducted under established site-specific procedures and are controlled and secure.	

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
	(B) does not have a dose rate on contact of more than 2 mSv/h from the accessible surfaces of the object, as prepared for shipment, and (C) does not have more than 4 Bq/cm² of contamination on the exterior surfaces, iii. a detailed transport plan covering all activities associated with the shipment, including (A) radiation protection, (B) emergency response, and (C) any special precautions or special administrative or operational controls that are to be employed during transport, and iv. details of the applicable management system;		
7	(f) if the transport of the nuclear substance cannot meet the requirements of these Regulations,	Nuclear substances in various forms and physical states are transported within the boundaries of the WL site. These movements are conducted under established site-specific procedures and are controlled and secure.	N/A

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
	i. information that demonstrates that the overall level of safety in transport is at least equivalent to that which would be provided if all the applicable requirements of these Regulations were met, ii. a statement of the reasons why the consignment cannot meet the requirements of these Regulations, and iii. a statement of any special precautions or special administrative or operational controls that are to be employed during transport to compensate for the inability to meet the requirements of these Regulations;		
7	(g) if the transport of the nuclear substance requires a special use vessel, i. the vessel owner's and operator's contact information, including, as applicable, their names, postal addresses, email	Nuclear substances in various forms and physical states are transported within the boundaries of the WL site. These movements are conducted under established site-specific procedures and are controlled and secure.	N/A

WL 2027 Licence Renewal Application

Information pursuant to the *Nuclear Safety and Control Act* – Enclosure 1

WLD-508760-160-000 Rev 1. 2026 July

Page 45 of 55

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
	addresses, telephone numbers and fax numbers, ii. a copy of the radiation protection program applicable to the shipment, iii. details of the consignment, iv. information on the stowage arrangements for the duration of the voyage, including for any consignments loaded or unloaded at ports of call en route, v. the dates, times and locations of arrival into and departure from Canada and of any scheduled stop in Canada, vi. a copy of any certificate or approval applicable to packages or materials in the consignment, vii. the name of the vessel and its flag state, and viii. a copy of any document issued by the competent authority of the vessel's flag state approving		

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
	the radiation protection program; and		
7	(h) if the transport of the nuclear substance requires approval of shipment in accordance with the IAEA Regulations, i. the period of time, related to the shipment, for which the approval is sought, ii. information on the radioactive contents, the expected types of conveyance and the probable or proposed route, iii. details of how the precautions and administrative or operational controls referred to in the approval for the package design, if applicable, that was issued in accordance with the IAEA Regulations are to be put into effect, iv. a copy of the applicable approvals for the package design, and v. in the case of fissile material, information on the sum of	Nuclear substances in various forms and physical states are transported within the boundaries of the WL site. These movements are conducted under established site-specific procedures and are controlled and secure.	N/A

Section	Requirement	CNL Response	Document Enclosed
Packaging and Transport of Nuclear Substances Regulations			
	criticality safety indexes and any related safety assessment, emergency response plan and administrative or operational controls.		

Table 5 - Nuclear Security Regulations [8]

Section	Requirement	CNL Response	Document Enclosed
Nuclear Security Regulations			
4	An application for a licence in respect of Category I nuclear material, Category II nuclear material or Category III nuclear material or a nuclear facility, other than a transport licence, must contain, in addition to the information required by section 3 of the <i>Nuclear Substances and Radiation Devices Regulations</i> or sections 3 to 8 of the <i>Class I Nuclear Facilities Regulations</i>, as applicable, (a) a nuclear security plan that contains i. a description of the proposed nuclear security system, including each nuclear security	CNL proposes to utilize the existing nuclear security plan(s) for the WL site through the requested licence period. These are implemented by the following FSAs: - Physical Security Program, through the documents referenced in SCA – Security, Licence Condition 12.1 of the current WL LCH [3]. - Nuclear Cyber Security as per SCA – Security, Licence Condition 12.1 and the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Nuclear Security Regulations			
	measure and any characteristics of the design of the nuclear facility that improve its security, ii. a list that identifies each nuclear security measure that is a critical security measure and that sets out the compensatory measures that will be implemented in the event that it becomes degraded, inoperative or compromised, iii. a description of the areas where Category I nuclear material, Category II nuclear material or Category III nuclear material or other nuclear substances are to be produced, used, processed, stored or transported and the location of those areas, iv. the written arrangements made between the applicant and any off-site response force,		

Section	Requirement	CNL Response	Document Enclosed
Nuclear Security Regulations			
	v. the plan and procedures to assess and respond to nuclear security events at the nuclear facility, vi. the process for controlling access to the nuclear facility and verifying the identity of each person who accesses it, vii. the processes for determining who, on entering or exiting the nuclear facility, will be searched or screened, and viii. the cyber security program consisting of the plans, policies and procedures for the protection of the computer systems and electronic components of the nuclear facility against cyber security threats identified in the threat and risk assessment; and (b) the threat and risk assessment.		
27	The nuclear security plan contained in an application for a licence in respect of a high-security site must contain, in addition to the	CNL proposes to utilize existing systems, equipment, procedures, measures, barriers and otherwise in place at the WL site in respect of these items. These are implemented by the following FSAs:	<i>Licensing Basis List for Whiteshell Laboratories</i> [5]

Section	Requirement	CNL Response	Document Enclosed
Nuclear Security Regulations			
	information and documents required under paragraph 4(a), the following information and documents: a) in the description of the proposed nuclear security system, a description of the central alarm station, the backup alarm station and the physical barriers, structures, devices and nuclear security measures in respect of each protected area, vital area and inner area in the site; b) a description of the protected areas, vital areas and inner areas in the site and the potential targets of sabotage and the location of those areas and targets in the site; c) information about the organizational structure, duties and training of nuclear security officers, the procedures those officers must follow and the minimum number of nuclear security officers and other	- Physical Security Program, through the documents referenced in SCA – Security, Licence Condition 12.1 of the current WL LCH [3]. - Nuclear Cyber Security as per SCA – Security, Licence Condition 12.1 and the WL LCH [3]. The aforementioned FSAs are described in the respective Program Description Documents referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5].	

Section	Requirement	CNL Response	Document Enclosed
Nuclear Security Regulations			
	personnel who will carry out duties related to security at the site; d) a description of the nuclear security measures that will be implemented by the licensee to ensure that an effective intervention can be made at that site, taking into account the design basis threat and any other threat identified in the threat and risk assessment; e) a description of the on-site and off-site communications equipment, systems and procedures; f) the tactical deployment plans developed with the off-site response force and, if any, the on-site nuclear response force, including an analysis of potential pathways for adversaries and security response times; and g) for each physical barrier and nuclear security measure that is intended to delay adversaries who are described in the design		

Section	Requirement	CNL Response	Document Enclosed
Nuclear Security Regulations			
	basis threat or the threat and risk assessment, an analysis of the delay time provided by that barrier or measure and the data supporting that analysis.		
100	An application for a licence to transport Category I nuclear material, Category II nuclear material or Category III nuclear material must contain, in addition to the information required under section 7 of the <i>Packaging and Transport of Nuclear Substances Regulations, 2015</i>, a transport security plan that includes (a) the name, quantity, radiation level in Gy/h, chemical and physical characteristics and isotopic composition of the nuclear material; (b) a threat and risk assessment; (c) a description of the conveyance and, if any, the escort arrangements; (d) the proposed security measures;	CNL proposes to utilize the existing transport security plan(s) in place for the WL site. These are implemented by the Security FSA as per SCA Security, Licence Condition 12.1 of the WL LCH [3]. The Security FSA is described in the Program Description Document which is referenced in the <i>Licensing Basis List for Whiteshell Laboratories</i> [5]. For the movement of nuclear material within the boundaries of the WL site, the WL Security Program has a Transportation Security Plan [4].	<i>Licensing Basis List for Whiteshell Laboratories</i> [5] <i>Transportation Security Plan</i> [4]

Section	Requirement	CNL Response	Document Enclosed
Nuclear Security Regulations			
	(e) a description of how the applicant will evaluate and improve the security measures, including the proposed scheduling of security exercises; (f) the planned route and at least one alternate route; (g) the tracking and communication arrangements made among the applicant, the operator of the land vehicle transporting the nuclear material, the recipient of the material and any off-site response force throughout the transport; and (h) the arrangements made between the applicant and any off-site response force throughout the transport.		

REFERENCES

- [1] *General Nuclear Safety and Control Regulations*, SOR/2000-202, Canada.
- [2] Canadian Nuclear Safety Commission, *Whiteshell Laboratories, Nuclear Research and Test Establishment Decommissioning Licence*, NRTEDL-W5-8.00/2027, Expiry Date: 2027 December 31.
- [3] Canadian Nuclear Safety Commission, *Licence Conditions Handbook for Whiteshell Laboratories*, NRTEDL-W5-8.00/2027, Revision 0, 2025 January 01.
- [4] *WL Transportation Security Plan*, 119-508710-PLA-021, Revision 0, 2026 March.
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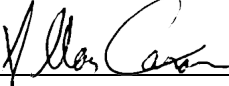


WL 2027 Licence Renewal Application

Enclosure 2 – Supplemental Information

WLD-508760-041-000

Revision 1

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This page is for Content Controls that apply to this document. If no Content Controls apply,
none will be listed.

Revision History

Rev. No.	Date	Details of Rev.	Authored By	Reviewed By	Approved By
1	2026 July 23	Issued for Approval.	J. Unrau	K. Shorter	A. Caron
1D1	2026 July 19	Issued for "Review and Comment". Minor updates made to sections 1.5, 3.2.3 and 3.10.1 following a sufficiency check by CNSC. Minor administrative and grammatical corrections made that did not alter the content.	J. Unrau	B. Scott	
0	2026 April 27	Issued for Approval.	N. Walters C. Gallagher K. Shorter	S. Brewer B. Scott B. Wilcox J. Osborne	B. Wilcox
D2	2026 February 12	Issued for "Review and Comment".	N. Walters C. Gallagher K. Shorter	A. Beckwith S. Brewer R. Dufour P. Kompass N. Leblanc M. Mackay B. Wilcox J. Tidmarsh P. Elder	
D1	2026 January 23	Issued for "Review and Comment".	N. Walters C. Gallagher K. Shorter	S. Brewer A. Caron K. Leroux K. Schruder B. Scott J. Unrau M. Vickard D. Waldman	

Table of Contents

Section	Page
1. Introduction	7
1.1 Purpose and Scope.....	7
1.2 CNL as the Licensee and Enduring Entity.....	7
1.3 CNL Mission.....	8
1.4 Overview of Whiteshell Laboratories	8
1.4.1 Whiteshell Laboratories Capabilities	9
1.5 Public Information and Disclosure Program	11
1.6 Indigenous Engagement	13
1.7 Sustainability	14
2. Delivering CNL's Missions at the Whiteshell Laboratories	15
2.1 Safety, Professionalism and Operational Excellence	15
2.2 CNL's Integrated Waste Strategy	16
2.3 Compliance Assurance	16
2.4 Decommissioning Program Overview and WL Site Restoration Plan.....	17
2.5 Low Level Waste Trenches.....	18
2.6 WR-1 Reactor	19
2.7 Standpipe and Bunker Waste Retrieval	20
2.8 Fuel Consolidation and Decommissioning of the Concrete Canister Storage Facility..	20
2.9 Sustained Use of WL Capabilities and Site Assets	21
2.9.1 Shielded Facilities.....	21
2.9.2 Future Site Use and Economic Opportunities.....	21
3. Safety and Control Measures.....	22
3.1 Management System	22
3.1.1 General Consideration	22
3.1.2 Management System	22
3.1.3 Organization.....	23

3.1.4	Performance assessment, improvement and management review	24
3.1.5	Operating Experience	25
3.1.6	Change Management.....	25
3.1.7	Safety Culture.....	26
3.1.8	Configuration Management.....	27
3.1.9	Records Management.....	27
3.1.10	Business Continuity	28
3.2	Human Performance Management	28
3.2.1	General Considerations.....	28
3.2.2	Human Performance Program	29
3.2.3	Personnel Training	29
3.2.3.1	Performance Improvements and Program Sustainability at WL	31
3.2.4	Work Organization and Job Design.....	31
3.2.5	Fitness for Duty	31
3.3	Operating Performance	32
3.3.1	General Considerations.....	32
3.3.2	Conduct of Licensed Activity.....	33
3.3.3	Procedures	33
3.3.4	Operating Limits and Conditions	33
3.4	Safety Analysis	34
3.4.1	General Considerations.....	34
3.4.2	Criticality Safety	34
3.5	Physical Design.....	35
3.5.1	General Considerations.....	35
3.5.2	Design Governance	35
3.5.3	Site Characterization	35
3.5.4	Facility Design	36
3.5.5	System and Component Design.....	36
3.5.6	Waste Treatment and Control	36
3.5.7	Control Facilities	36

3.5.8	Structure Design.....	36
3.6	Fitness for Service	36
3.6.1	General Considerations.....	36
3.6.2	Maintenance Program	37
3.6.3	Aging Management Program.....	37
3.6.4	Periodic Inspection and Testing Programs	38
3.7	Radiation Protection	38
3.7.1	General Considerations.....	38
3.8	Conventional Health and Safety	39
3.8.1	General Considerations.....	40
3.9	Environmental Protection.....	40
3.9.1	General Considerations.....	40
3.9.2	Effluent and Emissions Control	41
3.9.3	Environmental Management System	42
3.9.4	Assessment and Monitoring	42
3.9.5	Protection of People	43
3.9.6	Environmental Risk Assessment	43
3.10	Emergency Management and Fire Protection.....	43
3.10.1	Emergency Management.....	43
3.10.2	Fire Emergency Preparedness and Response	44
3.10.3	Fire and Emergency Management – Performance Improvements and Program Sustainability at WL.....	45
3.11	Waste Management	45
3.11.1	General Considerations.....	45
3.11.2	Waste Characterization	47
3.11.3	Waste Minimization.....	48
3.11.4	Waste Management Practices	48
3.11.5	Decommissioning Plans	48
3.12	Security	50
3.12.1	General Considerations.....	50

3.12.2	Response Arrangements	50
3.12.3	Security Practices	51
3.12.4	Security Training and Qualification	51
3.12.5	Cyber Security	51
3.13	Safeguards and Non-Proliferation	52
3.13.1	General Considerations.....	52
3.13.2	Nuclear Accountancy and Control	52
3.13.3	Access and Assistance to the IAEA.....	52
3.13.4	Operational and Design Information	52
3.13.5	Safeguards equipment, containment and surveillance	52
3.14	Packaging and Transport.....	53
3.14.1	Package Design and Maintenance	53
3.14.2	Registration for Use	53
3.15	Reporting.....	53
4.	Closing.....	54
5.	Acronyms	54
6.	References	55

Figures

Figure 1: Whiteshell 10 Year Strategic Plan	18
Figure 2: CNL Executive Team and Corporate Authorities	23

Whiteshell Laboratories is situated on the traditional lands of Treaties 1 and 3, and near Treaty 5. This land is the home of the Anicinabe, Ojibway Anishinaabe and the National Homeland of the Red River Métis. We recognize that many other Indigenous Peoples across the region and Canada also consider this area their home.

CNL 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.

We acknowledge, respect and seek to better understand Indigenous history, rights and title on the lands where we work and develop projects. We honour and respect the importance of the relationship between Indigenous Peoples and their lands, waters and territories.

CNL is committed to advancing truth and reconciliation through meaningful actions and the continued inclusion of and participation by Indigenous Peoples in the planning and execution of CNL missions. We recognize that reconciliation will take time and resources, but CNL remains committed to working together with Indigenous Peoples to benefit future generations.

1. Introduction

1.1 Purpose and Scope

This supplementary report forms part of Canadian Nuclear Laboratories Ltd. (CNL) application [1] to renew the Whiteshell Laboratories (WL) licence [2] for a period of 8 years. It provides:

- A description of the capabilities at WL that will be maintained into the next licence period.
- An update on the status of key initiatives that support decommissioning, restoration and closure of the WL site.
- An overview of CNL programs that implement applicable requirements under the Canadian Nuclear Safety Commission's (CNSC) 14 Safety and Control Areas (SCA), in alignment with Regulatory Document (REGDOC) [REGDOC-1.2.2, Licence Application Guide: Class IB Processing Facilities](#) [3].

This supplementary report supports CNL's licence renewal submission by offering a clear, structured account of how WL continues to meet regulatory expectations and uphold its obligations for safe, secure, and environmentally responsible operation while implementing Canada's international obligations.

1.2 CNL as the Licensee and Enduring Entity

CNL operates WL and other federal nuclear sites under the Government-Owned, Contractor-Operated (GoCo) model. In this arrangement, Atomic Energy of Canada Limited (AECL) owns the sites, facilities, and associated liabilities on behalf of the Government of Canada, while CNL is responsible for their day-to-day management, safe operation, and regulatory compliance. CNL

is a privately held Canadian corporation whose shares are owned by Nuclear Laboratory Partners of Canada Inc. (NLPC). CNL remains the enduring entity that holds the licence to operate and decommission the WL site.

1.3 CNL Mission

CNL's purpose is to advance nuclear science and technology for a clean and secure world. We will restore and protect Canada's environment by reducing and effectively managing nuclear liabilities. We provide the world with sustainable energy solutions including the extension of reactor operating lifetimes, hydrogen energy technologies, and fuel development for the reactor designs of tomorrow. Together, with partners, we will demonstrate the commercial viability of advanced reactor designs including Small Modular Reactor. We work collaboratively with medical/educational institutions and pharmaceutical companies to pioneer new alpha therapies for cancer treatments that save countless lives. We will leverage all our capabilities for commercial success in Canadian and international markets.

1.4 Overview of Whiteshell Laboratories

WL is a research campus that consists of Class IB nuclear facilities, laboratories, and waste management areas (WMAs). WL was established by AECL in the early 1960s to carry out nuclear research and development activities. AECL made a business decision in 1997 to discontinue most of the WL research programs and operations. In 1998, AECL received government concurrence to proceed with reduction of research activities and commence restoration of the site through decommissioning and waste management.

In 2002, the Canadian Government accepted the *WL Comprehensive Study Report* [4], the environmental assessment on the decommissioning of WL, and the CNSC issued the first WL Decommissioning Licence to AECL for the period from 2003 to 2008. This Licence was subsequently renewed by the CNSC for the periods from 2009 to 2018 with one year extension to 2019 and 2020 to 2024. Note that operational activities have continued since 2003, so while the focus at WL has been decommissioning activities, significant operational activities (both waste operations and research) are continuing. The current Nuclear Research and Test Establishment Decommissioning Licence, NRTEDL-W5-8.00/2027, expires on 2027 December 31 [2]. This licence authorizes CNL to:

- a) operate and decommission the Whiteshell site,
- b) produce, possess, process, refine, transfer, use, package, manage, and store the nuclear substances that are required for, associated with or arise from the activities described in a),
- c) possess, use, produce and transfer prescribed equipment that is required for, associated with, or arises from the activities described in a),
- d) possess, use and transfer prescribed information that is required for, associated with, or arises from the activities described in a),

- e) carry out the site preparation, construction or construction modification or undertaking that is required for, associated with or arise from the activities described in a).

WL continues to advance environmental remediation and decommissioning activities to address legacy environmental liabilities. This includes decommissioning of facilities, management of historic waste and restoration activities.

CNL operates the nuclear facilities to support restoration activities and service the broader CNL strategic priorities: Restore Canada's Environment, Clean Energy, and Contributing to the Health of Canadians. CNL safely stores fuel in concrete canisters and operates numerous capabilities in the waste management area including water treatment, soil management, and the storage, processing, and handling of various waste types. On the main campus, CNL maintains operational hot cells, waste sorting and segregation capability, laboratories, water treatment, and decontamination services.

CNL strives to safely deliver all work activities and to provide the highest level of performance in meeting the commitments made to regulators, customers, rightsholder, stakeholders, and the public.

1.4.1 Whiteshell Laboratories Capabilities

The WL site has features, assets, and capabilities to support not just CNL's environmental remediation mission but development of clean energy and research that benefits the health of Canadians as well. The nuclear industry is growing and expanding in western Canada. Alongside the focused mission to restore the WL site, CNL will be exploring other opportunities for the use of the assets at WL to support the Canadian Nuclear Industry. WL has highly trained and qualified staff, important site assets, and a supportive region for activities at the site.

CNL is committed to maintaining and operating the following capabilities in the next licence period while adhering to the highest standards of safety, security, and environmental stewardship at the WL site:

- Comprehensive radioactive waste management across Low Level Waste (LLW)/Intermediate Level Waste (ILW)/High Level Waste (HLW) and mixed waste.
 - Sorting, segregating, handling, packaging, and storage of hazardous and non-hazardous waste (including fuel).
 - Handling and storage of Fissionable Materials in the Concrete Canister Storage Facility (CCSF).
 - Waste retrieval, characterization, processing (e.g., segregation, compaction, packaging) in preparation for modern storage and final disposal.
 - Onsite overland transfer of liquid and solid radioactive wastes.
 - Transportation flask management.

- Decommissioning facilities, which includes post operational clean out, characterization, hazard reduction, system removal, structure demolition, and waste management activities.
- Environmental remediation, which includes characterization, implementation of cleanup technologies, waste management, as well as:
 - Environmental site assessment and contamination characterization
 - Human and environmental risk assessment for planned land use
 - Evaluation and selection of remediation and risk-management options
 - Remedial action planning and implementation readiness
 - Execution of remediation and risk-management measures with end-state verification
 - Project close-out and confirmation of remediation objective
- Material handling capabilities using both direct human operation and automated systems handling capabilities, including facilities and equipment that are used, modified, or constructed for the purpose of safely handling materials such as for volume reduction, sorting and segregating, processing, characterizing, modifying, and packaging.
- Remote handling and direct/remote observation of radioactive materials in shielded environments.
 - Decontamination of radioactive equipment and materials using shielded work areas.
 - Inspecting, characterizing, and repackaging legacy sources and materials from CNL sites.
 - Re-processing of CNL waste streams to recover high-value nuclear substances
 - Radioisotope process development, optimization, and production.
 - Post Irradiation Examination of fuel bundles, reactor core components, and material specimens.
- Operating functions that support the site such as maintenance, laundry, cleaning protective equipment, decontamination, and similar activities.
- Equipment and facilities that support non-nuclear activities, such as training for security, emergency management, and fire protection.
- Hosting Indigenous activities on site such as ceremony and traditional activities, including construction of suitable space to perform these activities.

- Participate in Small Modular Reactor progress, including potentially hosting a demonstration project at the WL.
- Hosting non-nuclear activities on behalf of the governments of Canada and Manitoba such as collection of weather information, seismic activity, or other similar endeavors.
- Leasing, renting, or otherwise hosting businesses and third parties, such as renting office or industrial space.
- Radioanalytical and radiochemical sample preparation, separation and analysis.
- Trace-level elemental, isotopic, and gas analysis in fuels, materials, environmental, and waste samples.
- Environmental monitoring and analysis of radiological and chemical contaminants in groundwater, surface water, effluents, soils, sediments, air-related samples, and biological media.

1.5 Public Information and Disclosure Program

CNL is committed to developing and maintaining positive relationships. These include the local communities where we work, the companies we do business with, as well as the public at large. CNL is committed to communicating in a timely manner and exchanging information with all stakeholders and rightsholders and recognizes the importance of listening and working with interested parties. CNL values the support of and engagement with those communities where we work, as this enables CNL to supply customers with the nuclear science and technology services they need, while contributing to a strong economy, a clean environment, and a healthy society. Further information on engagement with Indigenous Nations, communities, and organizations is included in Section 1.6.

This responsibility is guided and fulfilled through CNL's Public Information and Disclosure Program [5], which outlines public activities that occur at CNL, with the objective of addressing the information needs of interested parties. The program has been prepared in accordance with the [REGDOC-3.2.1, Public Information and Disclosure](#) [6].

The Public Information Program [5] outlines the ways in which the public receives communication from CNL, including the public disclosure protocol regarding events and developments involving facilities and activities. These specific elements include:

- Publication of documents describing the radiological and environmental impacts of CNL sites;
- Interactions with local communities, Indigenous Nations, and organizations to convey the specified information; and
- Publication of the results of CNL's monitoring programs on CNL's external website.

While CNL's Public Information Program is comprehensive, opportunities for improvement are continually considered. Public feedback is reviewed and addressed, and the program is modified when trends are identified. This includes the use of meeting evaluation and assessment forms, monitoring of inquiries for trends, ongoing reviews of the performance of communication products, public opinion polling, and the co-development of engagement plans. In all instances, accessibility to timely information on CNL and its operations is maintained.

Information about WLs activities is disseminated in a number of ways:

- CNL's corporate website: www.CNL.ca;
- Community Information Bulletins;
- Web postings and media releases;
- CONTACT newsletter (Chalk River and Whiteshell editions);
- Kids CONTACT newsletters (mailed to Port Hope, Chalk River, and Whiteshell catchments);
- Community meetings and events;
- Public engagement activities;
- Topical webinars;
- Social media (multiple platforms);
- Individual discussions by email, phone and in person;
- Visits to the project sites and laboratories;
- Paid advertisement in traditional and social media; and
- Speaking opportunities at conferences and trade events.

CNL posts environmental and performance reports to its corporate website, www.CNL.ca:

- Annual Compliance Monitoring Report summaries and site environmental performance are posted annually; in the Performance Report section of the external website; and,
- Event Reports for all CNL sites are posted quarterly in the Event Reports section of the external website.

For the WL site, CNL specifically communicates with:

- Indigenous Nations, communities and organizations;
- WL based CNL employee unions;
- Local business partners;
- Local government officials and related committees; and

- Public Liaison Committee.

1.6 Indigenous Engagement

In addition to the communication and engagement described in Section 1.5, and in accordance with [REGDOC-3.2.2, Indigenous Engagement](#) [7], CNL engages with Indigenous Nations and communities who are rightsholders, or who have an interest in, the sites CNL manages or operates. CNL values, recognizes, and enables the ongoing engagement and participation of Indigenous Nations, communities and organizations on activities related to the general operation of the sites and projects, potential impacts of CNL activities on Aboriginal and/or treaty rights and on environmental, economic, and employment matters.

For activities and operations at the WL site, CNL has engaged with the following Indigenous Nations, organizations and Governments:

- Sagkeeng Anicinabe Nation
- Peguis First Nation
- Black River First Nation
- Manitoba Métis Federation
- Hollow Water First Nation
- Brokenhead Ojibway Nation
- Wabaseemoong Independent Nation
- Grand Council Treaty #3 (Territorial Planning Unit)
- Shoal Lake No. 40 First Nation,
- Iskatewizaagegan No. 39 Independent First Nation
- Northwest Angle No. 33 Algonquins of Pikwakanagan First Nation (on material shipments to the CRL site from WL)

CNL recognizes that the many Indigenous Nations, communities and organizations with whom we engage have unique needs, resources and interests. Communications reflect these unique needs and follow agreed-to protocols for information sharing as determined by each Indigenous Nation, community and organization.

Information sharing with Indigenous Nations, communities and organizations may include:

- Presenting information in a format that is easily understood through a variety of communications channels using targeted key messaging;
- Engaging technical experts to communicate information in various formats;
- Accomplishing all required activities in a timely manner; and

- Providing various means for Indigenous Nations, communities and organizations to access information.

CNL proactively provides information regarding business activities and environmental remediation management projects. Notification is accomplished through email, letters, community engagements, information sharing at virtual meetings, and face-to-face meetings to ensure appropriate distribution of information in accordance with the recipient's desires.

Notably, through initiatives such as Sagkeeng Anicinabe Nation's community led environmental monitoring program, Niigan Aki ("Land First"), launched in 2022, the Nation continues to strengthen its capacity to monitor, share information and steward its territory. The program supports onsite participation and provides community members with access to information related to WL, which is situated within the Nation's traditional and treaty territory. Through on-site monitoring activities and ongoing information sharing, the Niigan Aki program enhances community understanding of the site and provides a structured mechanism for communicating findings, results, and project updates to Sagkeeng Anicinabe Nation members.

Engagement activities with Indigenous Nations, communities and organizations are occurring with respect to the application to renew the WL licence [2]. Activities to date have been meaningful, and CNL will provide further updates to CNSC staff and the Commission on these efforts as part of the licence application process.

1.7 Sustainability

Over the last several years, CNL has advanced sustainability as a core component of safe, compliant, and responsible nuclear operations. Sustainability has evolved into a structured, enterprise level program aligned with the Government of Canada's Greening Government Strategy and AECL's Environmental Social and Governance Strategy, supporting regulatory compliance, modernization, stakeholder engagement, and long-term stewardship.

Strategy and Reporting: Since 2021, CNL has published an annual [Sustainability Report](#) [8] outlining performance against sustainability goals and the integration of sustainable practices across AECL managed sites. In 2025, CNL issued its enterprise sustainability strategy to guide priorities and strengthen planning and reporting.

Integration: Sustainability considerations have increasingly been embedded into business planning, risk management, and operational decision making.

Environmental Stewardship: Environmental monitoring, waste management, and pollution prevention practices were enhanced to maintain compliance and reduce environmental impacts. Improvements in waste diversion, recycling, and materials management reduced CNL's environmental footprint while ensuring robust controls for nuclear and hazardous materials.

Climate: CNL advanced its understanding and management of greenhouse gas emissions by improving data quality, aligning with the [Green House Gas Protocol](#), [9] identifying energy efficiency opportunities, and developing guidance for integrating climate considerations into infrastructure.

Sustainable Procurement: Sustainable procurement practices were strengthened, including increased engagement with Indigenous owned companies, while maintaining safety, quality, and value for money requirements.

Social Responsibility: CNL continued to prioritize worker health and safety, well-being, Diversity Equity and Inclusion, accessibility, and engagement, while maintaining strong relationships with local communities and Indigenous Nations, communities, and organizations.

Overall, CNL has moved from foundational sustainability program development to a more integrated, risk informed, and performance driven approach.

2. Delivering CNL's Missions at the Whiteshell Laboratories

2.1 Safety, Professionalism and Operational Excellence

CNL is taking important steps to strengthen our culture of safety, professionalism, and operational excellence across all our sites. This initiative reflects our commitment to protecting workers, the public, and the environment, and ensuring our practices continue to meet the highest standards in the global nuclear industry.

To support this commitment, CNL is advancing a comprehensive program to enhance nuclear professionalism and safety culture. This work is guided by internationally recognized principles from organizations such as the Institute of Nuclear Power Operations (INPO) and is aligned with modern expectations for strong leadership, rigorous oversight, and continuous learning.

As part of this effort, CNL will:

- Establish clear organizational responsibility for nuclear professionalism and safety culture.
- Become a member of INPO to access world-class training, operating experience, and industry best practices.
- Strengthen engagement with Canadian and international nuclear organizations to share lessons learned and benchmark performance.
- Conduct safety culture assessments to identify strengths and opportunities for improvement.
- Reinforce key behaviours—such as consistent procedural compliance, conservative decision-making, and a strong questioning attitude—through leadership visibility, regular communication, and targeted training.

CNL's continuous improvement program will be leveraged to identify and confirm opportunities to reinforce expectations related to nuclear professionalism and safety culture.

These actions are designed to help CNL become a more effective learning organization and to support a sustained culture where safety and excellence guide every decision. Through continuous improvement and collaboration with our industry partners, CNL is working to

ensure that our operations remain safe, reliable, and aligned with the expectations of our regulator and the Canadian public.

2.2 CNL's Integrated Waste Strategy

The decommissioning of the WL site is summarized in the *Detailed Decommissioning Plan – Volume 1 – Program Overview* [10] and the restoration plan documenting CNL's clean up goals and proposed end state for the site, has advanced significantly (see Section 2.4). Waste management is critical to achieving the restoration of the WL site and CNL maintains a comprehensive lifecycle framework known as the [Integrated Waste Strategy](#) (IWS) [11]. This framework covers all waste types across CNL operated sites, including WL. The IWS supports planning, decision making, and communication by documenting current waste management practices and articulating the strategic vision for future projects and activities. Since 2018, CNL has achieved significant progress in implementing key elements of the IWS. A key connection point of the IWS with the WL restoration mission is the consolidation of radioactive waste at Chalk River Laboratories (CRL) (e.g., WL Fuel Transfer Project and the transport of LLW and ILW from the WL site). CNL has also placed increased emphasis on waste minimization across major projects. The IWS is routinely updated to reflect evolving policy, strategic direction, and operational experience. The most recent major update (Revision 2.1) was publicly issued in fall 2023, following the release of [Canada's Policy for Radioactive Waste Management and Decommissioning](#) [12] and the Nuclear Waste Management Organization's [Integrated Strategy for Radioactive Waste](#) [13].

2.3 Compliance Assurance

Under the new GoCo management, a new Compliance organization has been created, with a Vice President reporting directly to the CNL President and Chief Executive Officer (CEO) (see Section 3.1.3). A mandate of this organization is to improve oversight to help ensure CNL is compliant with requirements. One of the key initiatives is the development of a Due Diligence Program. The scope of the Due Diligence Program includes requirements management, performance or mission assurance, and training and qualifications. The new organizational design will provide focused oversight and ensure that:

- 1) Regulatory requirements are identified, documented, and effectively implemented.
- 2) Employees and supervisors are adequately trained and qualified for their specific role.
- 3) Supervision continuously promotes compliant behaviours and takes effective action to correct non-compliant behaviour.
- 4) Issues are effectively and timely addressed.
- 5) Effective key performance indicators and actionable analysis are available and used to identify issues and trends to be addressed.
- 6) A robust assessment process identifies issues and areas for improvement.

- 7) As a learning organization, Lessons Learned and Operating Experience are assessed and implemented.
- 8) Management critically assesses performance and takes effective action.

Part of this effort will involve improving management review of enterprise performance with respect to compliance and safety as well as improving the assessment process.

Collectively, these governance, oversight, and review mechanisms will strengthen the compliance framework and embed accountability, continuous improvement, and learning at all levels of the organization. This integrated approach positions CNL to proactively identify and address risks, sustain regulatory compliance, and continuously enhance safety and operational performance.

2.4 Decommissioning Program Overview and Whiteshell Laboratories Site Restoration Plan

CNL has a requirement to shut down and decommission the WL site. Activities are underway to complete the orderly decommissioning of the WL site, following the general plan laid out in the *WL Comprehensive Study Report* [4] which supported the approval of the EA of the WL Decommissioning Project. The *Detailed Decommissioning Plan – Volume 1 – Program Overview* [10] describes the strategy planned to place the Whiteshell Laboratory (WL) site in the monitoring and surveillance state, and indicates the approach considered for the final decommissioning end state. In total, twelve separate Detailed Decommissioning Plans address all the facilities, buildings, and areas at the WL site.

The *Whiteshell Laboratories Site Restoration Plan* (WLSRP) [14], formerly referred to as the Land-Use and End-State plan, is in a draft state and feedback from Indigenous and public engagement has been and continues to be incorporated. The document outlines the post-decommissioning, post-remediation, and post-closure strategy for WL. This plan is a key document guiding site closure.

The document reflects years of communication and engagement between AECL, CNL, and a wide range of Indigenous Nations, communities, organizations, and stakeholders that include the public, municipal governments, regulators, government agencies, environmental and citizen groups, non-governmental organizations, research and academia and businesses. These engagements have covered topics such as decommissioning plans, site conditions proposed for the end state, and community visions for the future of the site. As the project moves through decommissioning to site restoration, communication continues to adapt. Continued engagement is central to the WLSRP.

The WLSRP serves as a guide for the decommissioning process and defines the WL post-decommissioning, post-remediation and post-closure land use categories, clearance levels, cleanup criteria and end state decommissioning of the nuclear facilities, non-nuclear buildings, utilities, general infrastructure and impacted lands.

Continued refinement and ultimate completion and submission of the WLSRP to CNSC staff prior to the conclusion of the current licence period will ensure that an informed restoration strategy is adopted which seeks to minimize and reduce hazards, reduce long term risks, and maximize flexibility for future land use at the WL site.

During the upcoming licence period, implementation of the WLSRP will continue, with significant progress anticipated, particularly at the Concrete Canister Storage Facility (CCSF) and Waste Management Area (WMA). Planned activities include the decommissioning and demolition of unused buildings and structures on the main campus, as well as at the CCSF and WMA.

Over this licence period, the overall risk profile of the WL site is expected to be substantially reduced. Key risk-reduction activities include consolidating all fuel currently stored at the CCSF to CRL, and removing and shipping all, or most of the waste currently stored in the WMA's standpipes, ILW bunkers, and LLW bunkers. The WMAs and the shielded facilities will remain operational through the next licence period to support the restoration of the WL site.

Figure 1 lists initiation of substantial programs and decision points for the site restoration plan.

WL 10 Year Strategic Plan

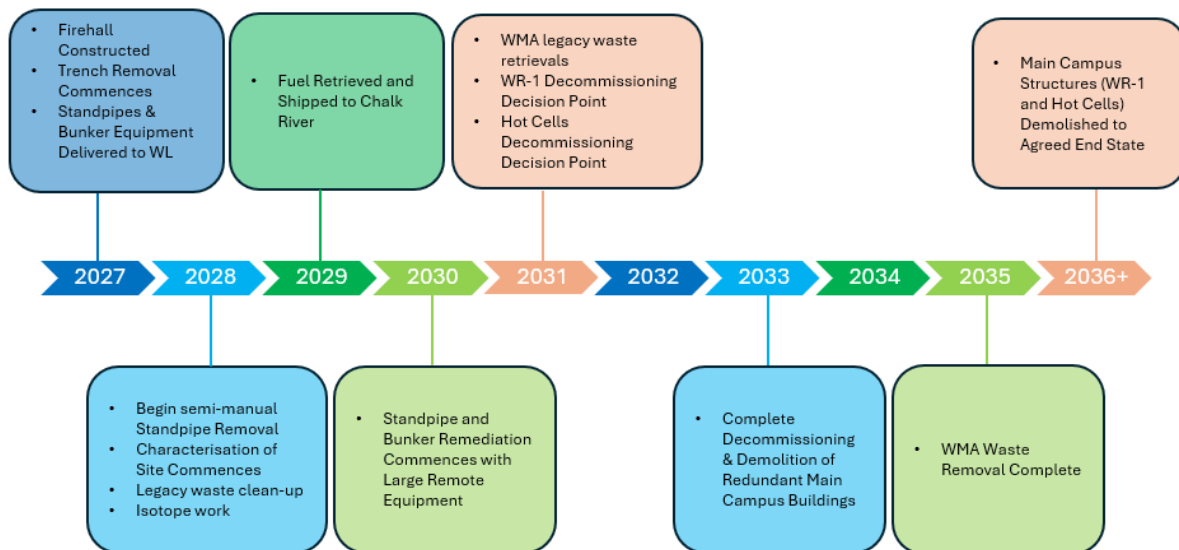


Figure 1: Whiteshell 10 Year Strategic Plan

2.5 Low Level Waste Trenches

During routine operations, WL built a total of 25 trenches within the WMA. From 1960 to 1985, these trenches were used to emplace LLW, with the exception of four trenches that contain materials other than LLW. These four trenches are designated for full remediation. The WL

Comprehensive Study Report [4] completed in 2002 recommended in-situ disposal of the remaining 21 trenches. The publication and implementation in 2021 of [REGDOC-2.11.1, Waste Management, Volume I: Management of Radioactive Waste](#) [15], triggered a re-assessment of CNL's plan for the trenches.

The three options for remediation of the LLW waste trenches are:

1. In situ disposal of the trenches' waste as stated in the 2002 *WL Comprehensive Study Report* [4];
2. Removal of the dry active waste with the clay cap and liner materials remaining in situ for natural attenuation: The dry active waste would be sorted and processed (compaction or incineration) and shipped for off-site processing and/or interim storage; and
3. Full removal of all dry active waste and affected clay material (caps and liners): The dry active waste and affected clay material would be sorted and processed (compaction or incineration) and shipped for off-site processing and/or interim storage.

Engagement with Indigenous Nations, communities, organizations and the public to gather feedback on the three options began in the latter part of 2023 and has been substantive in the current licence period. The engagements are focused on providing background on what type of waste is in the trenches and describing options regarding paths forward that are within the current regulatory requirements. Feedback received will help CNL choose a preferred option for the path forward for the trench waste.

Concurrent to engagement on the Trenches, site assessment programs were completed during the previous and current licensing periods. Characterization, work planning, and extensive Indigenous and public engagement will inform the final remediation strategy. CNL anticipates a decision on strategy in the current licence period once adequate engagement is complete.

Regardless of which option is selected, significant progress executing the selected option is expected to be made over the next licensing period.

2.6 WR-1 Reactor

The current, approved decommissioning approach for the WR-1 Reactor Building involves the complete removal of contaminated equipment, demolition of the above-grade structures and building, and remediation of the site. CNL may execute WR-1 dismantlement activities during the upcoming licence period.

CNL continues to pursue approvals through the environmental assessment process and a required licence amendment for a combined approach of physical decommissioning and in-situ disposal of parts of the WR-1 reactor. In 2025, an updated [Environmental Impact Statement](#) [16] and supporting documents were completed and submitted to support the proposed in-situ disposal approach. Indigenous and stakeholder engagement is ongoing, and CNL continues to respond to information requests from the Federal, Provincial, and Indigenous Review Team as part of the regulatory review process. All official interaction on the proposed in-situ

decommissioning of the WR-1 Reactor between CNL, the Commission and CNSC Staff will take place under separate formal submissions. Should CNL proceed with a request to amend the WL licence for in-situ disposal of WR-1, a separate licence proceeding will occur.

2.7 Standpipe and Bunker Waste Retrieval

The WMA includes one hundred seventy-one (171) standpipes and eight (8) ILW storage bunkers. The standpipes are vertical, in-ground storage structures that contain ILW waste packages. The bunkers are concrete storage areas containing ILW.

Recovery of waste items from the standpipes and bunkers will be carried out through a combination of manual retrieval, machine-aided retrieval, and using specialized, remotely operated equipment collectively referred to as the Standpipe and Bunker Waste Retrieval System (SBWRS). Waste handling, sorting, characterizing, processing, and packaging may occur at existing facilities at Whiteshell Labs, including with Sort and Segregation stations in the WMA or using capabilities in the WL Shielded Facilities.

The SBWRS is designed to remotely retrieve waste from the standpipes and ILW bunkers, then characterize, sort and condition it into LLW, ILW, Fissionable Material, and Special Fissionable Material.

Development of the SBWRS began in 2018 and is expected to be operational at the WL site by December 2027. During this period, additional site improvements and preparations have and are being made to accommodate the system.

The SBWRS and associated site preparations are expected to reduce hazards by enabling remote operations indoors within a purpose-built facility. Completing this work will significantly reduce overall hazards at the WL site by retrieving waste from existing storage structures and transporting it off-site in alignment with the IWS [11].

2.8 Fuel Consolidation and Decommissioning of the Concrete Canister Storage Facility

The CCSF provides storage for approximately 2,300 intact, irradiated fuel bundles, or sealed storage cans of defective fuel and fuel fragments from post-irradiation examination in the WL Shielded Facilities. The fuel material was either irradiated in the WR-1 reactor or resulted from post-irradiation examination of irradiated CANDU power station fuel. Also included in this inventory is approximately 360 intact fuel bundles from the Douglas Point reactor – this fuel was transferred to WL in the 1970s to demonstrate the dry storage of spent fuel. The fuel bundles or storage cans were placed into carbon steel fuel baskets of varying design. CNL is currently working to consolidate fuel at CRL.

CNSC staff have regulatory oversight throughout the entire fuel consolidation process. Additionally, the International Atomic Energy Agency (IAEA) safeguards personnel are fully informed and involved in the fuel recovery and transfer process. Consolidation efforts are underway, and safe and secure fuel transfers to CRL have begun. These fuel consolidation activities are expected to continue through 2029.

All the fuel will be removed from the CCSF, the canisters will be demolished, and the area will be remediated as per the *Detailed Decommissioning Plan – Volume 1 – Program Overview* [10].

CNL continues to engage both the public and Indigenous Nations, communities and organizations on CNL's IWS and WL Fuel Consolidation. Key engagement activities have included CNL's Transportation of Dangerous Goods public webinar and the Whiteshell Laboratories Site Restoration Plan webinar. CNL has also facilitated benchmarking trips with Sagkeeng Anicinabe Nation, Black River First Nation and Hollow Water First Nation to support broader engagement on CNL's IWS and WL Fuel Consolidation as a whole.

2.9 Sustained Use of WL Capabilities and Site Assets

2.9.1 Shielded Facilities

CNL intends to continue utilizing the capabilities and facilities at WL to support both the decommissioning mission and the science and technology mission, recognizing that these assets can and should be applied to a wide range of authorized activities. The Shielded Facilities at WL are valuable national resources whose full potential should be realized in support of Canada's nuclear sector. The engineered safety features of the hot cells—such as shielding, specialized ventilation systems, containment boundaries, and remote-handling capabilities—provide robust protection for workers, the public, and the environment. Leveraging these facilities for a broad range of activities, while maintaining the highest standards of safety and regulatory compliance, enhances Canada's and CNL's ability to innovate, respond to emerging industry needs, and deliver long-term, sustainable benefits. The hot cells at WL are already designated and undergoing maintenance to support essential waste-processing functions. Building on this foundation, CNL's use of the WL Shielded Facilities supports a multipurpose, sustainable approach to asset management. Applying these capabilities to activities such as waste processing, isotope-related research, materials characterization, and other science and technology functions, maximizes the value of infrastructure already in place and strengthens service delivery to the Canadian nuclear sector. CNL has been engaging Indigenous peoples, the public, municipal and provincial government on the expanded use of the hot cells and has received strong supportive feedback. Continued operation of these facilities enhances operational resilience, supports national health, science, and innovation priorities, and contributes to the long-term stewardship of Canada's nuclear assets.

2.9.2 Future Site Use and Economic Opportunities

Through extensive engagement with Indigenous Peoples, the public, and local governments, CNL has heard it is a priority of the region to use the land and infrastructure at the Whiteshell Laboratories for uses including economic development, traditional land activities, and recreational opportunities. Economic activities in this regard could include using existing facilities and infrastructure, or new construction, for research or commercial purposes, for both nuclear and non-nuclear applications. No decisions have been made, and CNL will assess proposals for site use on a case-by-case basis.

3. Safety and Control Measures

This section provides an overview of CNL's policies, programs, procedures and other documents that describe safety and control measures applicable at WL.

As new regulatory requirements are issued, they will be implemented at WL commensurate with their scope and applicability. Implementation will be managed through established change-management processes to ensure continued compliance with CNSC requirements and the protection of workers, the public, and the environment.

3.1 Management System

3.1.1 General Consideration

CNL has a *Management System Manual* [17] that sets the framework of policies, processes, and practices used to ensure that CNL can fulfill its mission and achieve its objectives. The Manual describes the relevant statutory, regulatory, contractual, culture, and corporate frameworks within which CNL exists and operates. CNL's Management System is based on and complies with the requirements of Canadian Standards Association (CSA) N286:12, *Management system requirements for nuclear facilities* [18], ISO 9001:2015, *Quality Management System Requirements* [19] and ISO 14001:2015, *Environmental Management Systems – Requirements with guidance for use* [20] and all relevant legal and regulatory requirements.

3.1.2 Management System

The Management System Safety and Control Area (SCA) is implemented through the CNL Management System, Quality, Supply Chain, and Information Management Functional Support Areas (FSAs). The CNL Management System ensures that the following principles of CSA N286:12 [18], are applied and considered when executing all CNL work:

- Safety is the paramount consideration guiding decisions and actions.
- The business is defined, planned, and controlled.
- The organization is defined and understood.
- Resources are managed.
- Communication is effective.
- Information is managed.
- Work is managed.
- Problems are identified and resolved.
- Changes are controlled.
- Assessments are performed.
- Experience is sought, shared, and used.

- The Management System is continually improved.

The Management System applies to all work performed by CNL employees, contractors and sub-contractors, as well as third parties engaged through external partnerships, joint ventures, or collaborations that perform work for and/or on behalf of CNL. It verifies that they are trained and competent and have sufficient knowledge of the Management System in order to conduct work according to CNL's expectations and requirements as reflected in policies and procedures.

3.1.3 Organization

Responsibility for the management and operations of each element of CNL's organizational structure is assigned to executives and senior management reporting to the President & CEO. CNL's current organizational structure is depicted in Figure 2. The Site Licence Holder for WL reports to the VP Whiteshell Restoration Project.

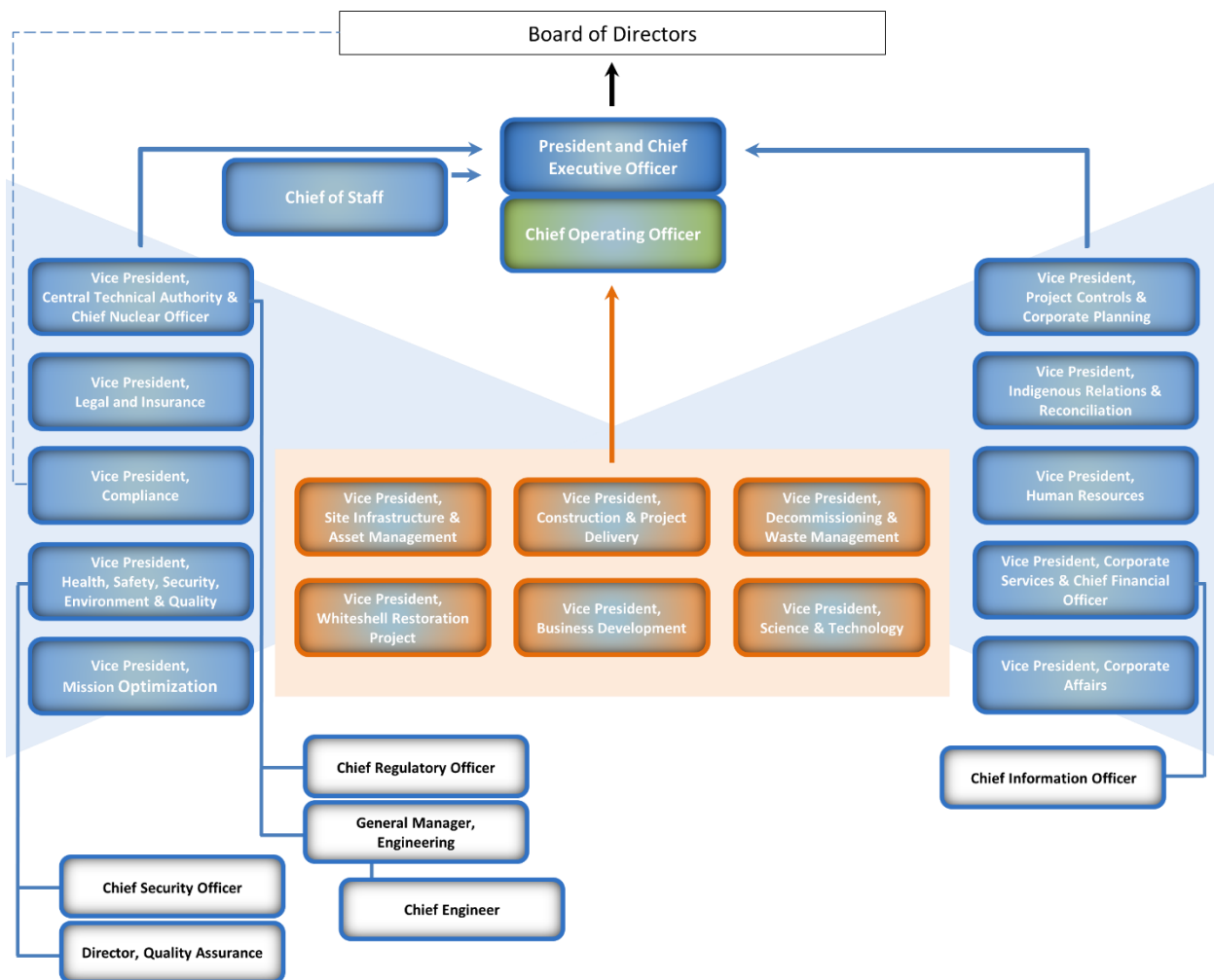


Figure 2: CNL Executive Team and Corporate Authorities

Site Licence Holders are designated Executives and/or Senior Management responsible for the management and control of licenced activities at their respective CNL-managed site(s). Site

Licence Holders are appointed by the President & CEO with the concurrence of the Chief Nuclear Officer and have the necessary functional authority to discharge responsibility for assuring the safe conduct and compliant operation of all licenced activities at their respective site(s), including, without limitation, the authority for operating or shutting down nuclear facilities and radioisotope laboratories, as the case may be.

CNL has an Authority Management process that ensures the appointment of personnel to Functional Authority roles is controlled and managed appropriately, and that personnel are selected based on consistently high standards and from the best-qualified candidates, that they receive the required training to perform effectively, and that their expected duties and responsibilities are well understood.

3.1.4 Performance assessment, improvement and management review

The Performance Assurance Functional Support Area (FSA) supports CNL's ability to improve operational performance, enhance safety, and reduce the occurrence of unplanned events. The FSA provides an improvement framework to assist in decision-making while promoting organizational learning, innovation, and continual improvement.

The Performance Assurance FSA implements the following comprehensive programs which work collaboratively to establish a system that ensures worker safety and promotes continual improvement:

- Problem identification and resolution enables the timely reporting of issues, problems, opportunities for improvement, and events and is inclusive of investigation and corrective action processes. These processes enable CNL to implement measures and mitigations to prevent recurrence.
- Measuring and monitoring processes support the creation of leading indicators through the collection and trending of data and promotes continual improvement through the implementation of programmatic reviews and assessments to confirm compliance to requirements and assesses program health.
- Continual improvement combines measuring and monitoring data with knowledge gained from benchmarking and lessons learned to ensure CNL effectively and efficiently implements improvement changes.

CNL has a Management Review process that critically assesses the implementation of the Management System to ensure its continuing suitability, adequacy and effectiveness. The outputs of various Management System assessment processes are reviewed to ensure the Management System's continued evolution remains aligned with company goals and objectives and enables safe, effective and efficient conduct of work that ultimately achieves planned and desired results.

CNL has an Integrated Assessment Plan that provides a collection of the internal and external assessment activities that are planned to be carried out at or by CNL of CNL's Management System processes.

CNL monitors its own compliance by conducting structured self-assessments that include reviewing procedures and records, directly observing work, interviewing staff, and using standardized questionnaires to verify that processes meet regulatory, safety, contractual, and internal requirements. These assessments document evidence-based observations, identify performance gaps or non-compliances, and set corrective actions so issues are formally tracked and resolved. CNL also conducts program reviews to evaluate the overall effectiveness of programs and confirm they are being implemented as intended. CNL uses benchmarking as a performance monitoring and improvement tool, comparing its practices to those of external high performing organizations to identify actions that close performance gaps, adopt industry best practices, and strengthen the implementation of regulatory requirements. In addition, internal Quality audits independently evaluate the implementation and effectiveness of CNL's Management System processes, assess conformity to regulatory, statutory, and CNL imposed requirements, and identify risks and opportunities. Together, these activities provide senior management with reliable, independent insights that support compliance assurance and continual improvement.

3.1.5 Operating Experience

The Operating Experience process promotes the identification and dissemination of operating experience and lessons to be learned from internal and external industry events in order to improve safety and reliability, and business processes, while reducing our time at risk and improving the overall performance of CNL. This process describes the mechanism for receiving, processing, screening, reviewing, evaluating and sharing internal and external operating experience across the CNL organization, as well as to the nuclear industry, while endorsing a learning organization culture.

3.1.6 Change Management

Change Management within CNL ensures that changes are controlled in a consistent and effective manner using an approach that safeguards workers from potential harm during the crucial period of transition. CNL's change management processes represent a core set of concepts, principles, organizational controls, methods, and skills, to provide an orderly, systematic approach to the planning, communicating, documenting, coordinating, scheduling, monitoring, and controlling of changes. CNL has numerous processes to control changes across the organization:

- Organizational changes involving resources and FSAs are controlled through the Organizational Change Control and the Functional Requirements and Framework Management processes.

- Physical changes to the facilities are controlled through CNL's Engineering Change Control process.
- Changes to facilities or operations, including deviation from design, operating conditions, policies, programs, and methods are assessed under CNL's Licensing Basis Assessment process, to determine whether the changes are permitted within the bounds of the existing licensing basis or whether a licence amendment is required. The licensing basis assessment is documented and made available to CNSC staff upon request. Where required, CNSC staff review the information submitted by CNL to independently determine if the proposed activity remains within the licensing basis.

3.1.7 Safety Culture

A healthy safety culture is an interpretation of how safety is integrated into everyday work and interactions. It is reinforced in how people, including leadership, work together to create a deeper understanding of the culture and its impacts on safety. Core values of: safety, teamwork, accountability, integrity, respect and execution excellence form the basis for CNL's safety culture. Monitoring to understand safety culture forms the foundation for building systemic safety improvements over time. CNL has an assessment framework to monitor safety culture which sets out the basis for the systematic review of safety culture against a defined set of characteristics; guides the identification of cultural findings, development of improvement action plans, and assessing effectiveness of these actions; and defines activities involved in assessing the maturity of CNL's organizational safety culture. Collectively these aspects ensure CNL's compliance with [REGDOC-2.1.2, Safety Culture](#) [21].

In 2024, CNL assessed its safety culture through the Safety Perception, Climate, and Chemistry Survey. The results showed that overall safety perceptions remained stable. Several areas demonstrated improvement, while others were sustained, indicating that CNL's safety culture continues to move in a positive direction. These findings reflect the ongoing efforts of CNL's teams and committees dedicated to strengthening safety performance. CNL's Safety Excellence Team continues to lead major safety initiatives, grouped under five themes: Communication & Recognition, Operational Excellence, Psychological Health & Safety, Safe Production, and Safety Leadership.

Continual improvement to safety culture and nuclear professionalism will be driven through visible leadership presence, reinforcement of safety expectations, increased engagement with INPO and industry peers, consistent communication, and integration with CNL's Management System.

CNL is taking important steps to strengthen our culture of safety, professionalism, and operational excellence across all our sites which are outlined in Section 2.1.

3.1.8 Configuration Management

The Configuration Management FSA facilitates orderly management of system and facility information, and system and facility changes for such beneficial purposes as to revise capability, improve performance, reliability or maintainability, extend life, reduce cost, risk and liability, or correct defects within approved safety margins and regulatory requirements.

The Configuration Management FSA 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.

The FSA specifies requirements for the following:

- Control, monitoring, and management of design and operational activities required for the configuration control, change control, operation support, and documentation of all facilities, operations, and processes.
- Processes for specifying acceptable replacement parts when an identical replacement is not available.
- Processes for creating or maintaining documentation and plant information models required for controlling safe operating limits, design basis, and configuration.

3.1.9 Records Management

The Information Management FSA develops, implements, and monitors controls that apply to all information assets (IAs), including structured, unstructured, or transitory, and extends to all activities throughout CNL. Information Management follows the requirements of all major standards CNL is certified against, as well as the other standards that have been adopted as best practices.

The Information Management Program establishes standards and procedures to facilitate the following:

- Establish ownership and stewardship of IAs.
- Oversee creation, capture, and use of information.
- Aligning data-related initiatives and activities with key business goals.
- Assign sensitivity designations (information protection labels) to IAs.
- Store and protect records to guarantee their accessibility and usability for the length of time required.
- Dispose of records with due diligence when their retention expires.
- Maintain governance of CNL's processes and documented procedures.

3.1.10 Business Continuity

The CNL Business Continuity Management Program subscribes to the Plan-Do-Check-Act model to address potential business disruptions of various scales and magnitudes and ensure critical functions either continue or are resumed within an acceptable period of time.

The WL business continuity approach provides procedures to respond, recover, resume, and restore operations to a predefined level following any disruption. Given WL's decommissioning mandate, recovery focuses on establishing a safe and resilient "new normal" rather than restoring all services to previous states. The Advanced Planning Unit leads recovery planning from the onset of an emergency, addressing impacts from natural disasters, accidents, sabotage or cyber events, labour disruptions, utility or communication failures, environmental releases, health emergencies, or loss of key contractors. Continuity actions include prioritizing disrupted services; assessing damage to buildings, infrastructure, equipment, and workforce readiness; and restoring nuclear safety controls, regulatory obligations, security systems, utilities, transportation access, critical supplies, and workforce supports. Where required, alternate work arrangements, temporary facilities, or revised project sequencing are implemented to maintain safe operations. These measures ensure that WL can sustain essential functions, protect workers and the public, and resume prioritized decommissioning activities in a controlled and compliant manner following any disruption.

3.2 Human Performance Management

The Human Performance Management SCA is implemented through the Performance Assurance, Health Centre, Human Resources, and Training and Development FSAs. It establishes practical methods and techniques for anticipating, preventing, and catching active human errors, as well as identifying and mitigating latent errors attributable to organizational factors.

3.2.1 General Considerations

Selection of qualified personnel is carried out through the Human Resources hiring process. Individuals assigned responsibilities are deemed competent based on their education, training, skills, and experience. Established training programs ensure that personnel receive the instruction necessary to perform their job functions.

Management identifies qualifications and training requirements to support safe operation of the site and to perform work under the WL licence [2] and in accordance with the Management System. Management verifies training compliance to ensure that only individuals who have completed the required training are assigned specific tasks.

Training programs are regularly monitored and assessed, and personnel competency is reviewed through performance management to maintain effectiveness and skill levels. Records of training, qualifications, and experience are maintained.

Performance Assurance FSA supports CNL's ability to improve operational performance, enhance safety, and reduce the occurrence of unplanned events. The FSA provides an

improvement framework to assist in decision-making while promoting organizational learning, innovation, and continual improvement.

The Health Centre FSA facilitates a safe and healthy workplace for employees and supports employees to maintain, improve, and regain their health when needed.

The Human Resources FSA upholds all human resources requirements under federal legislation through the implementation of the CNL Employee Lifecycle processes covering the following phases: Attract and Recruit, Onboard, Empower, Develop and Recognize, and Transition. This includes a robust Fitness for Duty Program (Section 3.2.5).

The Training and Development FSA strengthens organizational capability by providing the programs, resources, and support that enable workers and leaders to develop the competencies required to perform their roles safely, effectively, and in alignment with business needs.

3.2.2 Human Performance Program

The Performance Assurance FSA supports the safety of employees and the public and protection of the environment. Comprehensive programs are in place establishing a system that ensures worker safety and promotes continual improvement as described in Section 3.1.4. Human performance also provides workers with tools and skills to reduce errors and prevent/eliminate events.

The adequacy of qualified staffing is routinely monitored through established governance forums, such as Curriculum Review Committees (CRCs). These oversight bodies review training completion data, qualification status, upcoming expiries, and staffing risks on a quarterly basis. Through these discussions, emerging gaps in qualified personnel are identified early, and corrective actions or mitigation plans are developed to ensure that each facility and program area maintains the necessary number of competent and authorized workers. This structured, recurring oversight provides senior management with confidence that workforce capability is sustained and aligned with operational and regulatory requirements.

CNL has developed a gap analysis and an implementation plan for [REGDOC-2.2.1, Human Performance](#) [22].

3.2.3 Personnel Training

The Training and Development FSA maintains the training program's governing documents and oversees the implementation of a Systematic Approach to Training (SAT). Training and Development's SAT-based program satisfies the conditions outlined within the WL Licence Conditions Handbook (LCH) [23] as well as the [Nuclear Safety and Control Act](#) [24], the regulations made under the Nuclear Safety and Control Act, and any other applicable legislative and/or regulatory requirements.

CNL's SAT provides a standardized approach to training and qualification to ensure that personnel are trained, competent, and qualified for the work they are assigned. CNL maintains a list of positions and roles that require a SAT-compliant training program. The positions and

roles on this list are those that have been identified as performing activities where the consequence of improper performance could potentially pose a severe risk to nuclear safety, security, environment, or the health and safety of persons.

The SAT processes are applied to the development of training plans for positions that perform licensed activities. The CNL SAT is based on fundamental processes and sound practices that systematically assess the need for training, type of training, and training content, as well as providing standards for the development, implementation, and evaluation of training. A graded approach, commensurate with risk, is used in the application of the SAT. A graded approach supports decisions related to the specific processes used and the rigour and level of detail required in the supporting Training and Development Program documents.

The CNL Training and Development FSA implements the requirements in [REGDOC-2.2.2, Personnel Training](#) [25] and other CNL licensing basis documents and ensures compliance with these regulatory requirements at CNL. The main objectives of the Training and Development Program are as follows:

- Ensure human performance effectiveness through highly trained, competent employees.
- Maintain the company-wide training standards required to ensure a rigorous and compliant Training and Development Program.
- Provide training oversight, guidance, and resources to support all CNL missions.
- Evaluate all training plans to ensure quality and compliance with requirements.
- Maintain a Learning Management System that ensures employee qualifications are recorded and accessible to CNL management.

CRCs are a key governance mechanism within the organization's SAT program, ensuring that training remains effective, current, and aligned with regulatory expectations. As part of the SAT maintenance and evaluation phases, CRCs conduct structured reviews of training content, learning objectives, trainee performance data, and operational feedback to confirm that each program continues to meet job requirements and safety-critical competencies. CRCs also assess and approve all Training Change Requests, evaluating the rationale, impacts, and alignment with SAT principles before updates are implemented. Through this systematic oversight, the committees ensure that changes driven by operational experience, procedural updates, new technology, or regulatory amendments are appropriately analyzed and integrated. This disciplined review process helps maintain the integrity of the SAT program and supports continuous improvement across all training portfolios.

Contractors that will be performing or supervising work on behalf of CNL must also have their training requirements, certifications and qualifications reviewed by CNL to confirm they have the relevant capabilities, qualifications and experience applicable to the work activities defined in the scope, prior to commencement of work.

3.2.3.1 Personnel Training – Performance Improvements and Program Sustainability at WL

The current licence period has been focused on implementing improvements and ensuring sustainability of performance of the Training program. CNL acknowledges the below expectations rating received from the CNSC in 2023 and 2024 for training related issues at WL, including gaps in the maintenance of Workplace Hazardous Materials Information System (WHMIS) qualifications, incomplete application of the SAT for the Emergency Operations Centre (EOC) Commander and Firefighter roles, and training related deficiencies identified during CNL's 2023 Fire Protection self-assessment. Throughout this licence period, CNL advanced corrective actions to address these findings, including:

- Provided training and support to all WL managers and supervisors on using CNL's Learning Management System reporting to improve visibility of assigned training, due dates, and qualification status.
- Granted access to managers and supervisors for the Learning Management System Qualification Checker report to enhance oversight of employee training and ensure training requirements are monitored consistently.
- Revised and updated the Firefighter Job and Task Analysis to align role expectations, required knowledge and skills, and qualification pathways with SAT.
- Created a WL-specific EOC Commander Task Analysis, establishing a defined role profile and training requirements consistent with SAT application.

These completed actions represent measurable progress toward addressing the training related issues identified by CNSC staff and improving the clarity, consistency, and oversight of training programs at WL. The SAT training actions for the WL Firefighters will be complete in 2026 May.

3.2.4 Work Organization and Job Design

CNL maintains a number of implementing documents across various programs and functions (e.g., fire, security, emergency preparedness, operations) that define minimum staffing for those programs or by operational task. These documents also identify the authorities who define minimum staffing levels and those who have responsibility for maintaining that minimum complement.

3.2.5 Fitness for Duty

CNL has a robust Fitness for Duty Program, which ensures that individuals who may present a safety hazard to themselves or others receive appropriate intervention to effectively manage impairment, psychological wellness, and fatigue. The Fitness for Duty Program applies to CNL employees, visitors to CNL sites, and to contractors who have not expressly assumed responsibility for Fitness for Duty under the applicable contract. Contractors who have expressly assumed responsibility for Fitness for Duty may follow their own program.

The Fitness for Duty Program includes compliance with [REGDOC-2.2.4, *Fitness for Duty, Volume II, Managing Alcohol and Drug Use*](#) [26] for safety-sensitive and safety-critical workers. The WL safety-sensitive workers as defined by REGDOC-2.2.4, Volume II [26] include:

- Nuclear Security Officer
- Security Training Officer
- Armourer
- Emergency Operations Centre Commander
- Firefighter
- Fire Training Officer
- Fire Prevention Officer

The WL safety-critical workers as defined by REGDOC-2.2.4 Volume II [26] include:

- Tiered Response Force Officer

CNL's Fitness for Duty Program is consistent with the "defence-in-depth" concept that underpins and informs all effective nuclear safety programs. The Human Resources FSA provides interpretation of requirements, and the Fitness for Duty Program Administrator advises supervisors and management regarding fitness for duty concerns they may have observed in the workplace.

CNL adheres to [REGDOC-2.2.4, *Fitness for Duty: Managing Worker Fatigue*](#) [27], by setting out clear expectations of hours of work and continual monitoring. CNL records all exceedances of hours of work for safety-sensitive positions.

CNL adheres to [REGDOC-2.2.4, *Fitness for Duty, Volume III: Nuclear Security Officer Medical, Physical and Psychological Fitness*](#) [28] by ensuring the requirements of this regulatory document are implemented prior to CNL authorizing the person to act as a Nuclear Security Officer at all sites, including WL.

3.3 Operating Performance

The Operating Performance SCA is implemented through CNL's Conduct of Operations, Construction, Commissioning, and Configuration Management FSAs.

3.3.1 General Considerations

All work activities at WL are planned, controlled, and defined in approved plans, procedures, instructions, and drawings. Integrated Work Control (IWC) forms the basis for the control of all work performed at WL and is used for work activities where hazards may be present or introduced. IWC ensures that the level of planning for work activities is commensurate with the risk associated with the work and uses a graded approach to define the work, identify and analyze hazards, develop and implement controls, perform work within controls, and provide feedback and continuous improvement. Through a team approach to job planning, the IWC process ensures that facility activities are carried out safely and efficiently.

Radiation doses to workers and the public, as well as any planned discharges or releases of radioactive or hazardous substances, are controlled through implementation of defined

processes under the Radiation Protection and Environmental Protection FSAs (Sections 3.7 and 3.9, respectively).

Structures, systems, and components at WL are routinely inspected and maintained to ensure that they function according to design specifications and regulatory requirements. Refer to Section 3.6 for details.

3.3.2 Conduct of Licensed Activity

The Conduct of Operations FSA ensures that facility operations are managed, organized, and conducted in a manner that results in high levels of safety, performance, and reliability while maintaining compliance with the applicable acts, standards, codes, regulations, and regulatory requirements.

The WL Site Licence Holder holds overall responsibility for the safe and compliant execution of licensed activities at the site. This responsibility is delegated to Facility Authorities and other personnel who oversee facility operations and enforce adherence to established procedures.

The handling, storage, and transport of nuclear and hazardous substances are controlled through implementation of defined processes under the Transportation of Dangerous Goods, Occupational Safety and Health, Waste Management, Nuclear Criticality Safety, Nuclear Materials and Safeguards Management, and Radiation Protection FSAs.

3.3.3 Procedures

The Conduct of Operations FSA maintains a suite of documents describing the processes and tools to control the development, verification, validation, and implementation procedures, including operating procedures and operating manuals, emergency operating procedures, and infrequently performed operating procedures.

Procedures created through the application of the Conduct of Operations process documents are reviewed and updated as necessary to ensure that they remain current, and appropriate resources are assigned to verify and validate the procedures as they are created or revised.

Procedures governing the decommissioning of facilities at WL are maintained and updated by the Cleanup FSA, as described in Section 3.11.

3.3.4 Operating Limits and Conditions

The operating limits and conditions for WL facilities are described in the Facility Authorizations. They include limits on operating parameters, requirements relating to minimum operable equipment and minimum staffing, and prescribed actions to be taken by operating personnel. Any exceedance of the operating limits and conditions is investigated to determine the cause, identify appropriate corrective actions, and assess any regulatory reporting requirements.

Operating Limits and Conditions for shutdown facilities or facilities undergoing decommissioning are detailed in Storage with Surveillance Plans and Detailed Decommissioning Plans, as described in Section 3.11.

3.4 Safety Analysis

The Safety Analysis SCA is implemented through CNL's Safety Analysis and Criticality Safety FSAs.

3.4.1 General Considerations

The Safety Analysis FSA is aligned with [REGDOC-2.4.4, *Safety Analysis for Class IB Nuclear Facilities*](#) [29], and governs all safety analysis activities at WL by developing and controlling a suite of nuclear safety analysis documents required to support the execution of safety analysis. It ensures systematic evaluation of potential hazards and the effectiveness of preventive measures using deterministic and probabilistic methods, validated analytical tools, and a graded approach commensurate with risk. The program includes planning, hazard identification, and classification of events, execution of analyses, and verification against acceptance criteria.

Independent technical reviews of safety analyses and a robust quality assurance framework, compliant with CSA N286:12 [18], provide confidence in the accuracy and traceability of results.

Safety Analysis Reports (SARs) are maintained and updated for all licensed facilities, including those at WL. CNL is currently updating SARs for nuclear facilities at WL to full compliance with REGDOC-2.4.4 [29].

3.4.2 Criticality Safety

CNL's Nuclear Criticality Safety FSA is aligned with [REGDOC-2.4.3, *Nuclear Criticality Safety*](#) [30], and establishes the framework for preventing accidental nuclear criticality and mitigating its consequences during operations with fissionable material at WL.

Areas where fissionable material is handled at WL are categorized as either Nuclear Criticality Controlled Areas (NCCAs) or Non-NCCAs, based on the criteria for categorizing operations with fissionable material in REGDOC-2.4.3 [30]. For each NCCA, a Criticality Safety Document is prepared which defines all limits, restrictions, and criticality safety controls required to maintain subcriticality under normal and credible abnormal conditions. Criticality Safety Documents are prepared in adherence with a robust quality assurance framework and are independently reviewed, providing confidence in the accuracy and traceability of the results. CNL is currently updating individual Criticality Safety Documents to full compliance with REGDOC-2.4.3 [30].

Regular and systematic oversight of operations with fissionable material is achieved through well-defined roles and responsibilities ranging from line management and supervision of the operations to the technical support personnel within the Nuclear Criticality Safety FSA.

3.5 Physical Design

3.5.1 General Considerations

The Physical Design SCA is implemented through CNL's Design Authority and Design Engineering FSA and Pressure Boundary FSA. These FSAs maintain and control the design basis of Structures, Systems and Components (SSC) at CNL within approved safety margins and regulatory requirements to ensure the protection of workers and the environment, and meet the requirements of:

- [National Building Code of Canada](#), 2020 [31]
- [National Fire Code of Canada](#), 2020 [32]
- CSA N286:12, *Management system requirements for nuclear facilities* [18]

3.5.2 Design Governance

The Design Authority and Design Engineering FSA has the responsibility to ensure the technical integrity of designs and design processes. This includes establishing requirements for planning, executing, verifying, and documenting design activities in compliance with applicable laws, codes, standards and regulatory requirements.

The CNL Design Authority (Chief Engineer) holds ultimate responsibility for design and engineering decisions across all CNL activities, facilities and practices, with delegated authorities assigned for specific engineering scopes.

Design engineering applies a graded approach based on the safety significance and nature of the design work to be performed, consistent with CSA N286 [18]. Design changes, whether permanent or temporary, are managed using an Engineering Change Control process and are controlled by the responsible Delegated Design Authority during all stages of design development and implementation, including changes to facility equipment, Structures, Systems, and Components (SSCs), processes, and controlled computer software.

3.5.3 Site Characterization

The *WL Comprehensive Study Report* [4], accepted in 2002 in support of the environmental assessment for the decommissioning of WL, contains details on the characteristics of the WL site. It is used together with federal and provincial data sets (e.g., ECCC Canadian Climate Normals or Averages) to support safety-related documentation at WL, including facility SARs, by providing detailed information on WL geography, geology, hydrology, and meteorological hazards (e.g., tornadoes). As stated in the [CNSC's Commission Members Document](#) for the 2024 WL licence hearing [33] the *WL Comprehensive Study Report* [4] "identified and evaluated climate change sensitive hydrological and meteorological hazards affecting the performance of the decommissioning activities and the nuclear facilities at the WL site". Other routine document submissions to CNSC (e.g., SARs and [WL's Environmental Risk Assessment](#) (ERA))[34] use up to date climate data and ensure CNL's assessments and work planning account

appropriately for climate change.

3.5.4 Facility Design

The design of WL's Class I nuclear facilities is described in the respective facility-specific SARs.

3.5.5 System and Component Design

The characteristics and major components of the systems applicable to the licensed activities are described in the facility-specific SARs.

CNL's Pressure Boundary FSA governs design, procurement, fabrication, installation, inspection, and maintenance of pressure retaining systems and components through documented processes and procedures. The design of pressure-retaining SSCs and their supports at CNL sites, including WL, is based on CSA N285.0 *General requirements for pressure-retaining systems and components in CANDU nuclear power plants*/Material Standards for reactor components for CANDU nuclear power plants [35] and associated standards.

CNL utilizes an Authorized Inspection Agency (Manitoba Inspection and Technical Services) to inspect and certify pressure vessels on an accepted schedule. The program is supported by site-specific Quality Assurance Plans, which detail controls for material traceability, welding, inspection, and compliance verification.

3.5.6 Waste Treatment and Control

WL has dedicated facilities for the characterization, treatment, and control of wastes including the WMA. The Waste Management FSA governs processes for waste characterization and minimization. Refer to Section 3.11 for more information.

3.5.7 Control Facilities

Any control rooms in the licensed facilities are or will be identified in the respective facility-specific SARs or facility authorization documents.

3.5.8 Structure Design

Facility structures and designs are described in the respective facility-specific SARs.

3.6 Fitness for Service

3.6.1 General Considerations

The Fitness for Service SCA is implemented through CNL's Fitness for Service FSA, which encompasses the maintenance, system health, and aging management processes.

These processes work together in a systematic and integrated manner to ensure that equipment and services are available as per their design intent and are functioning within the operating limits and conditions.

3.6.2 Maintenance Program

CNL's Maintenance Program ensures that all SSCs remain fit for service and capable of performing their design functions through a structured approach defined by several interrelated procedures. The procedures:

- establish a graded approach for classifying SSCs based on criticality and failure consequences.
- ensure SSCs remain fit for service by detecting, precluding, or mitigating degradation through preventive maintenance including periodic maintenance, predictive maintenance, and planned maintenance.
- provide the systematic process for initiating, planning, scheduling, executing, and closing out maintenance work.
- govern continuous improvement by analyzing feedback from preventive and corrective maintenance activities, calibration results, and condition monitoring data to optimize maintenance strategies.

Together, these procedures address SSC monitoring, corrective maintenance, work planning and scheduling, work execution, post-maintenance verification and testing. This integrated framework ensures SSCs continue to meet design intent and regulatory requirements throughout their lifecycle.

A computerized maintenance management system is used to control the initiation, planning, scheduling, execution, and close-out of maintenance work at WL and to maintain electronic records of maintenance history.

3.6.3 Aging Management Program

Aging Management at WL is executed through CNL's Fitness for Service FSA and aligns with the requirements of [REGDOC-2.6.3, Aging Management](#) [36].

The SSCs screened and selected for the aging management program are those that are all of the following:

- Within Class I nuclear facilities,
- Are systems important to safety, and
- Are categorized as maintenance Category 1.

The performance, reliability, and condition metrics for systems important to safety in Class I nuclear facilities will be documented in System Performance Monitoring Plans. System Health Reports are generated to identify the results from condition monitoring, the effectiveness of aging management strategies, and actions to improve effectiveness.

Facility Authorities manage the implementation of aging management in their facilities and ensure that performance monitoring activities are executed.

3.6.4 Periodic Inspection and Testing Programs

Periodic inspection and testing of SSCs important to safety is performed under the maintenance process, as described above. Pressure vessels, boilers, and pressure piping are inspected by the Manitoba Inspection and Technical Services as described in Section 3.5.5.

3.7 Radiation Protection

The Radiation Protection SCA is implemented through CNL's Radiation Protection FSA. This FSA implements and supports the radiation protection requirements stipulated in the [Radiation Protection Regulations](#) [37], and other applicable requirements.

3.7.1 General Considerations

The Radiation Protection Program includes five key process objectives that ensure CNL meets all regulatory requirements. For each objective a suite of program documents has been developed for implementation. The implementation of these processes is commensurate with the radiological hazards associated with CNL's licensed activities. These objectives are to:

1. Optimize the care and control of radioactive material and the radiation protection provided to CNL and non-CNL personnel entering licensed CNL sites, members of the public, and the environment during normal operations. Minimize the radiological consequence resulting from unplanned events or emergencies. Processes have been developed to include:
 - Prohibiting the consumption of food around radioactive nuclear substances;
 - Preventing contaminated clothing from leaving the workplace;
 - Setting performance criteria for ventilation systems;
 - Protecting workers using personal protective equipment and clothing; and
 - Implementing safety codes with respect to x-ray emitting devices.
2. Keep the dose received by and committed to persons as low as reasonably achievable (ALARA) given social and economic factors. This is accomplished through:
 - Management control over work practices;
 - Personnel qualification and training;
 - Control of occupational and public exposure to radiation; and
 - Planning for unusual situations.
3. Ascertain the quantity of radioactive material released from CNL control. This is a shared objective with the Environmental Protection SCA (refer to Section 3.9) and Waste Management SCA (refer to Section 3.11) and includes the following:
 - Monitoring air effluents and liquid emissions;

- Monitoring of waste for off-site disposal;
 - Controlling movements of non-waste equipment and materials;
 - Monitoring of non-human biota; and
 - Personnel contamination monitoring.
4. Ensure that worker and public exposure to ionizing radiation is managed. It includes the function of informing workers of the risks of ionizing radiation, so that the workers can manage their exposures to the best of their ability. Specifically, these processes include:
- Ensuring regulatory dose limits are not exceeded;
 - Creating and reporting on action levels;
 - Notifying workers of the risks and responsibilities regarding nuclear radiation;
 - Posting of radiation warning signs at the boundaries of areas;
 - Labelling and signage of containers and devices;
 - Managing the exposure for pregnant and breastfeeding workers;
 - Ensuring radiation measuring devices are selected, tested, and calibrated correctly; and
 - Ascertaining, recording, reporting, and notification of worker doses through CRL Licensed Dosimetry service.
5. Ensure processes are in place to safely use radioactive nuclear substances which includes the following:
- Ensuring safety when operating x-ray emitting and exposure devices;
 - Leak testing sealed sources and shielding;
 - Ensuring radiation survey meters are calibrated annually; and
 - Use and design requirements for Class II facilities prescribed equipment.

3.8 Conventional Health and Safety

The Conventional Health and Safety SCA is implemented through CNL's Occupational Safety and Health (OSH), Electrical Safety, and Health Centre FSAs. Together these FSAs implement and support the conventional health and safety requirements stipulated in the [Canada Labour Code](#) [38], [Canada Occupational Safety and Health Regulations](#) [39], and other applicable requirements in accordance with the *Safety and Health Policy* [40]. Other FSAs, including Human Resources, Training and Development, and Emergency Preparedness, implement a limited number of additional requirements under the [Canada Labour Code](#) [38] and the [Canada Occupational Safety and Health Regulations](#) [39].

3.8.1 General Considerations

The OSH FSA consists of teams and processes that work together to protect the health and safety of employees and others on site. Key groups include OSH Programs and Standards, which develops safety policies and procedures, and Health and Safety Services, which support hazard identification, implementation of controls, and performance monitoring. The OSH FSA provides the rules and tools to a) manage specific types of hazards, such as asbestos management and hazardous energy control (lock out/tag out), and b) safety perform specific types of work, including work at heights and confined space entry. Contractors performing work at CNL's sites must either comply with CNL's OSH policies and procedures or their own OHS policies and procedures that have been assessed by CNL for equivalency.

CNL's Industrial Hygiene staff investigates, evaluates, and prescribes controls to protect personnel from exposure to hazardous substances at work, including chemical, physical and biological agents (e.g., asbestos, lead, organic vapour, dust).

The Electrical Safety FSA sets out procedures for safely working with and around electrical equipment, performs risk assessments such as Ark Flash Analyses, manages risks from electrical hazards, defines training requirements, and acts as the authority having jurisdiction for granting approvals for experimental equipment.

The Health Centre FSA facilitates a safe and healthy workplace for employees and supports employees to maintain, improve, and regain their health when needed. It leads initiatives to improve physical wellness and mental health and, in cases of injury, provides treatment and manages any accommodations and progressive return to work.

WL has a Site Safety and Health Committee that serves as the primary forum for joint employee-management consultation on workplace health and safety concerns. Its mandate is to promote and continuously improve the health and safety of all WL personnel and to develop practical solutions to identified issues. In addition, CNL has a Health and Safety Policy Committee, which is the principal forum for collaborative development of health and safety policies and programs across the organization.

3.9 Environmental Protection

The Environmental Protection SCA is implemented through CNL's Environmental Protection FSA. This FSA implements and supports the Environmental Protection requirements stipulated in the [Nuclear Safety and Control Act](#) [24], [Radiation Protection Regulations](#) [37], [Canadian Environmental Protection Act](#) [41] and other applicable laws and regulations.

3.9.1 General Considerations

The Environmental Protection FSA provides the processes and framework to implement CNL's *Environmental Policy* [42]. A graded approach to requirements is applied based upon environmental risks or events that could occur at any given location and considering the amount of control or influence that CNL has on the activity.

The Environmental Protection FSA at WL is designed to implement the requirements of the following standards:

- [REGDOC-2.9.1, Environmental Principles, Assessments and Protection Measures](#) [43].
- CSA N288.1, *Guidelines for modelling radionuclide environmental transport, fate and exposure associated with the normal operation of nuclear facilities* [44].
- CSA N288.4, *Environmental monitoring programs at Class I nuclear facilities and uranium mines and mills* [45].
- CSA N288.5, *Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills* [46].
- CSA N288.6, *Environmental risk assessments at Class I nuclear facilities and uranium mines and mills* [47].
- CSA N288.7, *Groundwater protection programs at Class I nuclear facilities and uranium mines and mills* [48].
- CSA N288.8, *Establishing and implementing action levels for releases to the environment from nuclear facilities* [49].

The Environmental Protection FSA is continuously updated to meet new or updated requirements.

Where required, the assessment of activities proposed at WL occurs pursuant to the [Impact Assessment Act](#) [50].

3.9.2 Effluent and Emissions Control

Controls on environmental releases are established to provide protection to the environment and to respect the principles of sustainable development and pollution prevention. The effluent and emissions preventive and control measures are established on the basis of best industry practice, incorporating the application of ALARA, process optimization, continuous improvement and the results of an Environmental Risk Assessment (ERA). In conjunction with specific regulatory monitoring requirements, the ERA provides the technical foundation and structure for identifying the need for, and details of, effluent and emissions monitoring. The effluent monitoring program is conducted in accordance with CSA N288.5, *Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills* [46] as required by the WL licence [2].

Environmental action levels are developed in accordance with CSA N288.8, *Establishing and implementing action levels for releases to the environment from nuclear facilities* [49] as required by the WL licence [2]. WL is currently conducting a gap analysis and developing an implementation plan for [REGDOC-2.9.2, Controlling Releases to the Environment](#) [51].

3.9.3 Environmental Management System

An Environmental Management System (EMS) is a framework used for the protection of the environment. This framework is used to develop and implement an environmental policy and to manage those elements of an organization's activities, products, or services that can interact with the environment. The EMS provides an organization with a systematic method of achieving its environmental obligations and performance goals. Under the CNL Management System, the EMS for WL is registered to the ISO 14001:2015 [20] standard for *Environmental Management Systems*.

3.9.4 Assessment and Monitoring

Environmental monitoring consists of a risk-informed set of integrated and documented activities to sample, measure, analyze, interpret and report one or all of:

- The concentration of nuclear and hazardous substances in environmental media to assess one or both of:
 - The exposure of receptors to those substances
 - The potential effects on human health, safety and the environment, including calculation of the dose to public.
- The intensity of physical stressors and/or their potential effect on human health and the environment.
- The physical, chemical and biological parameters of the environment normally considered in the design of the environmental monitoring necessary to support the interpretation of the results.

The environmental monitoring program (EMP) at WL is conducted in accordance with CSA N288.4, *Environmental monitoring programs at Class I nuclear facilities and uranium mines and mills* [45]. The EMP encompasses three integrated components: (1) environmental monitoring, (2) effluent/emission verification monitoring, and (3) groundwater monitoring. Together, these three components provide data for the WL site's contaminant pathways monitoring, enabling the monitoring of contaminant levels in abiotic and biotic compartments in the environment.

In addition, CNL maintains an extensive Biodiversity Monitoring Program to support regulatory compliance, environmental protection, and informed decision making. The program is aligned with requirements under the [Species at Risk Act](#) (SARA) [52], [Migratory Birds Convention Act](#) (MBCA) [53], and the [Fisheries Act](#) [54], as well as applicable provincial guidance and industry best practices. Biodiversity monitoring includes targeted surveys to document species presence, distribution, and habitat conditions for terrestrial and aquatic valued ecosystem components, including species at risk, migratory birds, and fish and species habitat. Collected data are used to assess ecological trends, support impact assessments, guide mitigation measures, and meet regulatory reporting obligations.

3.9.5 Protection of People

CNL maintains a comprehensive EMP to verify that radiation doses to members of the public as a result of radioactive releases from the WL site remain ALARA, taking into account both social and economic factors. The program demonstrates that the radiation dose to the most exposed members of the public (i.e., representative persons) due to WL operations does not exceed regulatory limits and also serves to verify that non-radiological releases do not pose hazards to human health, and that neither radiological nor non-radiological releases pose hazards to the environment.

3.9.6 Environmental Risk Assessment

An Environmental Risk Assessment (ERA) is a systematic process that identifies, quantifies and characterizes the risk posed by contaminants (nuclear or hazardous substances) and physical stressors in the environment. It is a practice or methodology that provides science-based information to support decision-making and to prioritize the implementation of mitigation measures. An ERA is conducted in accordance with CSA N288.6, *Environmental risk assessments at Class I nuclear facilities and uranium mines and mills* [47] as required per the WL licence [2]. A human health risk assessment is completed as a sub-element of an ERA for both nuclear and hazardous substances. [WL's ERA](#) [34] was updated and submitted to the CNSC staff in 2023 May. A copy of the ERA is available on the CNL website.

3.10 Emergency Management and Fire Protection

The Emergency Management and Fire Protection SCA is implemented through CNL's Emergency Preparedness and Fire Protection FSAs.

3.10.1 Emergency Management

Under the Emergency Preparedness FSA, CNL has a comprehensive Emergency Preparedness Program for the prevention and mitigation of, preparedness for, response to, and recovery from abnormal and emergent events, including on-site and off-site emergencies. The Program meets the requirements of [REGDOC-2.10.1, Nuclear Emergency Preparedness and Response](#) [55].

Emergency response procedures have been established at WL to address various emergency situations. The *Whiteshell Laboratories Site Emergency Response Plan* [56] describes the actions and associated responsibilities to ensure a timely and appropriate response to emergencies, including nuclear emergencies and conventional emergencies. Various other emergency procedures, including building emergency procedures, are maintained to outline response actions to be taken to minimize potential environmental, health and safety impacts. Depending on the nature and scale of an emergency, the appropriate emergency response procedure is activated and notifications provided to communities surrounding the site. The emergency response procedures are reviewed, updated, and tested in the form of drills and exercises in accordance with CNL's five-year drill and exercise plan for WL.

WL has an EOC for centralized decision-making and communication for control and recovery from emergency events that originate at WL, for off-site transportation accidents involving radioactive materials and support under the Federal Nuclear Emergency Plan (FNEP). Routine training is conducted to ensure adequate succession planning for all WL EOC positions. WL Emergency Management staff continue to ensure that all EOC's are tested and maintained.

The Radiation Assessment Team (RAT) is available to respond to radiation emergencies on site, transportation accidents involving radioactive material offsite, and requests in support of the mutual aid agreements with other Canadian nuclear utilities such as Bruce Power, Ontario Power Generation, New Brunswick Power, Hydro Québec. The WL RAT also provides required responses under the FNEP, as well as for exercises and training with both internal CNL groups and with external groups such as groups listed under the FNEP. A complete inventory of all RAT equipment is taken annually; instruments are checked for functionality and calibrated as per calibration requirements in applicable legal and regulatory requirements. All emergency equipment is maintained in a state of operational readiness through routine inspections. Emergency management procedures and plans identify the equipment required for response to abnormal events. The equipment readiness is routinely verified.

3.10.2 Fire Emergency Preparedness and Response

CNL has a company-wide Fire Protection Program to prevent or minimize fire-related risks to people, property, and programs. The program operates through three lines of defense:

- education and training,
- standards and code compliance, and
- emergency response.

Key components of the Program include Fire Operations (i.e., response and training), Fire Protection Systems (i.e., installation and maintenance of fire safety systems), and Technical Services (i.e., hazard assessments and code reviews). The program also applies the defense-in-depth principle described in CSA N393 *Fire protection for facilities that process, handle, or store nuclear substances* [57], which emphasizes prevention, detection, consequence mitigation, and control measures to ensure robust fire protection.

The fire response capabilities at WL are governed by CSA N393 [57] and are documented in a fire response needs analysis which is submitted to the CNSC staff. Additionally, the WL fire brigades have respective training needs analyses and training plans, and various fire and emergency related standards, procedures, and detailed work instructions which influence the site firefighting strategies and address the response readiness of Fire Operations.

The WL fire brigade is capable of providing fire suppression and other designated services to mitigate loss-of-life and property damage 24 hours per day, 7 days per week (24/7) and which meet the requirements of NFPA 600, *Standard on Facility Fire Brigades* [58] and NFPA 1081, *Standard for Facility Fire Brigade Member Professional Qualifications* [59]. The WL Fire Brigade is considered a safety-sensitive position and meets the requirements of [REGDOC-2.2.4, Fitness](#)

[for Duty, Volume II: Managing Alcohol and Drug Use](#) [26]. A Mutual Aid and Fire Service Agreement is in place between WL and the local municipality to provide reciprocal assistance during emergencies.

3.10.3 Fire and Emergency Management – Performance Improvements and Program Sustainability at WL

The current licence period has been focused on implementing improvements and ensuring sustainability of performance of the Fire and Emergency Management program. In April 2023, a self-assessment revealed gaps in the fire program at WL, including deficiencies in staff training and qualifications. This led to a temporary pause of non-essential work at the site to reduce risk, while a root cause analysis was conducted and immediate actions were implemented. A multi-phase restart plan was implemented, culminating in the resumption of normal operations in September 2024. A total of 55 corrective actions were identified and executed to address causal factors and areas of non-compliance, followed by an effectiveness review in September 2025 to ensure sustainability and prevent recurrence of similar events.

The WL Fire Department has strengthened its organizational structure by moving to four 10-person platoons that provide 24/7 coverage, supported by 47 highly experienced firefighters with extensive NFPA certifications and mutual aid agreements across the region. Significant investments in specialized training—such as high angle, confined space, water and ice rescue—and upgraded apparatus and training facilities have enhanced operational readiness. The department has completed key sustainability improvements to fire systems, maintenance processes, and reporting tools, and continues to upgrade pumps, alarm systems, and infrastructure to ensure long-term compliance with CSA N393 [57]. Ongoing internal and external audits, including quarterly self-assessments under the Fire Protection Oversight Plan, provide continuous oversight, identify gaps, and ensure corrective actions remain effective.

3.11 Waste Management

The Waste Management SCA is implemented through CNL's Waste Management and Cleanup FSAs. Together these two FSAs cover the processes required to implement and support the waste management requirements stipulated in the [Nuclear Safety and Control Act](#) [24], [Nuclear Fuel Waste Act](#) [60], [Nuclear Liability and Compensation Act](#) [61] and other applicable laws and regulations.

3.11.1 General Considerations

The Waste Management and Cleanup FSAs are designed to implement the requirements of the following standards:

- [REGDOC-2.11, Framework for Radioactive Waste Management and Decommissioning in Canada](#) [62].
- [REGDOC-2.11.1, Waste Management, Volume I: Management of Radioactive Waste](#) [15].

- [REGDOC-2.11.1, Waste Management, Volume III: Safety Case for the Disposal of Radioactive Waste](#) [63].
- [REGDOC-2.11.2, Decommissioning](#) [64].
- CSA N292.0, *General principles for the management of radioactive waste and irradiated fuel* [65].
- CSA N292.2, *Interim dry storage of irradiated fuel* [66].
- CSA N292.3, *Management of low- and intermediate-level radioactive waste* [67].
- CSA N292.4, *Storage of radioactive waste and irradiated fuel* [68].
- CSA N292.8, *Characterization of radioactive waste and irradiated fuel* [69].
- CSA N294, *Decommissioning of facilities containing nuclear substances* [70].

The purpose of the Waste Management FSA is to ensure that (a) activities, facilities, and records corresponding to the planning, generation, handling, processing, transporting, storage, and disposal of wastes are performed or managed in a manner that protects workers, the public, and the environment, in compliance with applicable regulatory and licence requirements; and (b) the waste hierarchy is effectively implemented.

The Waste Management FSA establishes requirements and guidelines pertaining to waste management at CNL. Consistent company-wide processes are established and implemented at CNL for all stages of the waste management lifecycle. The FSA also maintains supporting procedures, standards and implementing documents.

The Waste Management FSA includes the Waste Characterization Program that focuses on the development and execution of waste characterization plans.

CNL's Waste Management FSA together with other company-wide programs address the six principles of radioactive waste management set out in REGDOC-2.11 [62]:

- generation of radioactive waste is minimized to the extent practicable by the implementation of design measures, operating procedures and decommissioning practices.
- management of radioactive waste is commensurate with the waste's radiological, chemical and biological hazard to the health and safety of persons, to the environment and to national security.
- assessment of future impacts of radioactive waste on the health and safety of persons and the environment encompasses the period of time during which the maximum impact is predicted to occur.

- predicted impacts on the health and safety of persons and the environment from the management of radioactive waste are no greater than the impacts that are permissible in Canada at the time of the regulatory decision.
- measures needed to prevent unreasonable risk to present and future generations from the hazards of radioactive waste are developed, funded and implemented as soon as reasonably practicable.
- trans-border effects on the health and safety of persons and the environment that could result from the management of radioactive waste in Canada are not greater than the effects experienced in Canada.

The Cleanup FSA ensures a CNL wide approach to effective land use planning, decommissioning, demolition, environmental remediation, end-state reporting and internal land transfer post decommissioning or environmental remediation. The FSA ensures there is adequate and appropriate Indigenous, public, and stakeholder engagement, which is conducted as part of the planning process and considered throughout the facility lifecycle.

The implementation of the Cleanup FSA is covered by four processes which are graded commensurate with the hazards of the site, facility or activity. These processes are land use, decommissioning, environmental site assessment and remediation, and closeout.

The Land Use process, ensures that all CNL managed sites have a consistent approach in developing and maintaining Site Overview Cleanup Plans with robust, relevant, achievable, and verifiable land uses (interim or final end-states). The Land Use process ensures that overview cleanup planning takes a holistic lifecycle approach so that that project-level implementation is aligned with the site's goals.

The Decommissioning process ensures a consistent approach to facility decontamination, dismantlement, and demolition and the Environmental Site Assessment and Remediation process ensures a consistent approach to land area characterization, assessment and remediation. Together these two processes ensure projects meet their planned land uses and end-states aligned with the targets within the site's Overview Cleanup Plan.

The Closeout process provides verification and documentation of the end-states and land uses ensuring consistency and provides the records to support licence changes, when appropriate.

3.11.2 Waste Characterization

CNL maintains an implementing document which establishes the minimum requirements for characterizing solid and liquid waste, including materials that may become waste, to ensure safe handling, storage, processing, transportation, and disposal, consistent with CSA N292.8 [69] and other regulations and standards. CNL ensures that adequate data are available to inform decision-making for safety assessments, current and future waste handling activities, including handling, packaging, storage, processing, transportation, decommissioning, disposal, site remediation, or other waste management objectives, as applicable, consistent with CSA

N292.8 **Error! Reference source not found.** and REGDOC-2.11.1 Volume III [63]. Waste characterization begins during planning for waste generation where feasible and may occur at any stage of the waste management lifecycle ahead of disposal, to ensure timely and accurate data collection. A graded approach is applied to ensure characterization efforts are proportionate to waste complexity and risk.

3.11.3 Waste Minimization

Waste Minimization is a shared objective with the Environmental Protection SCA (refer to Section 3.9).

CNL uses the Waste Hierarchy for waste management decision making applying waste minimization techniques to reduce the quantity of all waste classes requiring disposal, to as low as practicable. Across all CNL-operated sites, these techniques are considered in order, at the onset of all planned work and at source. The techniques are: prevent, reduce, reuse, recycle, and dispose. The Waste Management FSA adheres to *CNL's Environment Policy* [42] that states that waste should be dealt with at the highest practicable level in the hierarchy. The Waste Hierarchy is applied at all stages of the waste management lifecycle.

3.11.4 Waste Management Practices

CNL applies comprehensive, company-wide programs that cover all lifecycle stages of waste management - planning, generation, transportation, processing, storage, and end-of-life disposal. Measures to protect workers, the public, and the environment are incorporated into each stage.

CNL optimizes waste handling through detailed planning, characterization, and verification processes to ensure waste meets Waste Acceptance Criteria and regulatory requirements. Processing steps such as size reduction and segregation further enhance efficiency and safety.

CNL's programs recognize that waste management stages are not always linear and evaluate each step both individually and as part of an integrated system. Interdependencies are addressed within CNL's IWS [11] which applies to all CNL managed radioactive and non-radioactive waste streams for the full waste management lifecycle. This establishes integration and alignment with the goals and requirements of CNL's primary business missions, including lifecycle cost optimization.

CNL maintains documentation throughout the waste lifecycle, ensuring traceability and regulatory compliance for all waste streams.

3.11.5 Decommissioning Plans

For modern facilities, decommissioning is considered throughout the lifecycle of a facility. The Decommissioning Process begins during planning of a proposed nuclear facility, continues throughout the construction and operations of the facility, culminates in active decommissioning, and concludes when the predefined end-states have been achieved. CNL is responsible for many legacy facilities that were built at a time when the requirement to

consider decommissioning as part of design was not in place. In most cases CNL entered the Decommissioning Process during the operations phase by developing preliminary decommissioning plans. REGDOC-2.11.2 [64] recognizes the unique challenges of these legacy facilities.

The Cleanup FSA guides sites through the Decommissioning Process and maintains process documents. The Decommissioning and Demolition Program ensures that each site is decommissioning and demolishing facilities in a consistent and safe manner that is aligned with site goals in order to reach the target next land use and end state safely and effectively. A graded approach is used for the decommissioning activities based on the licence or legal requirements, complexity, level of risk and the residual hazards present, and applies to a variety of facilities, including buildings, systems, and engineered structures (infrastructure). A decommissioning plan defines areas to be decommissioned and the general structure and sequence of the principal decommissioning work packages envisioned.

In accordance with WL Licence Condition 11.2, the *Whiteshell Laboratories Detailed Decommissioning Plan – Volume 1 – Program Overview* [10] is maintained and reviewed and revised as required, at least every five years.

Planning for decommissioning focuses on managing the entire waste lifecycle—from generation and processing to storage and safe disposal—while addressing long-term liability. A waste management strategy must be developed as part of the planning for decommissioning, detailing anticipated waste volumes, classifications (e.g., clean, LLW, ILW, HLW), waste streams, and disposition pathways. The strategy includes a commitment to apply the waste hierarchy (reuse, recycle, minimize disposal) and may be documented in a stand-alone plan or within the Detailed Decommissioning Plan.

The waste management plan covers short and long-term considerations and includes:

- Identified waste streams and estimated quantities.
- Waste characteristics.
- A systematic process for moving waste from generation to final disposition.

As required by REGDOC-2.11.2 [64] and CSA N294:19 [70], the decommissioning planning includes a safety assessment to identify radiological and non-radiological hazards to workers, the public, and the environment from routine decommissioning activities and credible abnormal conditions. These assessments are prepared using a graded approach.

The safety assessments:

- Identify hazards from planned activities, abnormal conditions, and natural events.
- Evaluate risks and define mitigation measures.
- Confirm safety functions and defence-in-depth controls.
- Address interdependencies between decommissioning actions.

- Demonstrate measures to maintain hazards at acceptable levels during and after decommissioning.

Results of the assessment support the decommissioning planning by informing strategy selection, safety procedures, inspection programs, and competency requirements, ensuring decisions are made using an integrated, risk-informed approach.

3.12 Security

The Security SCA is implemented through the Security and Nuclear Cyber Security FSAs. Together, these two FSAs cover the processes required to implement and support the security requirements stipulated in applicable laws and regulations and the WL licence [2].

Information regarding the Security SCA is considered confidential-prescribed information and will be provided under separate cover.

3.12.1 General Considerations

The Security FSA is responsible for ensuring the protection of CNL personnel, facilities and nuclear materials in accordance with the CNL *Security Policy* [71]. WL is considered a high-security site and as such, CNL has implemented robust security FSA to meet the requirements of the [Nuclear Security Regulations](#) [72] and the following REGDOCS:

- REGDOC-2.12.1, *High-Security Sites, Volume I: Nuclear Response Force*, Version 2 [73].
- REGDOC-2.12.1, *High-Security Facilities, Volume II: Criteria for Nuclear Security Systems and Devices* [74].
- [REGDOC-2.12.2, Site Access Security Clearance](#) [75].
- [REGDOC-2.12.3, Security of Nuclear Substances: Sealed Sources and Category I, II and III Nuclear Material](#) [76].

The details of WL's security function are outlined in the *Whiteshell Laboratories Site Security Report* [77] and *Implementation Plan: Tiered Response Force (TRF)* [78]. In addition, a *Transportation Security Plan* [79] has been developed and is used to support the on-site transportation of material as required under the [Packaging and Transport of Nuclear Substances Regulations](#), 2015 [80] and [Nuclear Security Regulations](#) [72]. Copies of these documents have been submitted to and approved by CNSC staff and will not be described further in this attachment due to the security nature of the information.

CNL recognizes that revised [Nuclear Security Regulations](#) were published in 2025 October [81] and is formulating implementation plans for the new regulations, pending publication of the supporting REGDOCs anticipated in late 2026 or early 2027.

3.12.2 Response Arrangements

WL has formal arrangements with the Royal Canadian Mounted Police in accordance with all *Nuclear Security Regulations* [72] requirements. This includes annual site visits to ensure

familiarization with the site and a review of current emergency response arrangements. WL also has a formal plan for the security and the protection of sealed sources. All plans and arrangements are submitted to CNSC staff.

3.12.3 Security Practices

The Security FSA is responsible for the development and implementation of security policies, procedures, and emergency plans to ensure compliance with applicable laws and regulations as well as the *CNL Security Policy* [71] and industry best practice.

The Security FSA is also responsible for administering security awareness programs, conducting minor investigations and supporting major investigations, providing technical direction to support security needs on a company-wide basis and analyzing operational experience trends and data used to monitor performance.

CNL's Personnel Security Services is responsible for safeguarding employees and information, facilities, and assets by providing efficient security screening and investigative services. Personnel Security Services provides support to the programs and business processes in accordance with the needs of the organization, regulators, key stakeholders and Government of Canada policies and regulations.

3.12.4 Security Training and Qualification

At WL, Physical Security Operations is comprised of Nuclear Security Officers, Tiered Response Force Officers, supervisors, training cadre, and is led by the Security Operations Manager. Training for these positions is provided to meet the requirements of the *Nuclear Security Regulations* [72] and REGDOCS listed in the WL licence conditions handbook [23]. The Nuclear Security Officers and Tiered Response Force Officers are subject to the requirements of REGDOC-2.2.4, *Fitness for Duty, Volumes I, II and III* [27], [26], [28].

Training of non-security personnel at WL includes a suite of Security Awareness training modules and the Continuous Behavioural Observation Program which has been designed to prevent and mitigate insider threats by developing staff's ability to recognize and respond to indicators that could pose a risk to the safety and security of personnel, assets, operations or facilities. These training modules require a refresher on a 3-year frequency.

3.12.5 Cyber Security

CNL has implemented a cyber security function that is compliant with CSA N290.7-14, *Cyber-security for nuclear power plants and small reactor facilities* [82]. The roles and responsibilities for the Cyber Security program have been defined. CNL is currently in discussion with the CNSC staff on the scope and applicability of the CSA N290.7-21 standard at the WL site.

The Nuclear Cyber Security FSA provides standards, processes, and oversight over Cyber Essential Assets for systems important to nuclear safety, nuclear security, emergency preparedness, safeguards and auxiliary assets, that, if exploited could adversely affect those previously listed.

Training is provided to all staff involved with the management and use of Cyber Essential Assets. In addition, a suite of training modules has been rolled out to all staff to ensure understanding of cyber security and Information Technology threats.

3.13 Safeguards and Non-Proliferation

The safeguards and non-proliferation SCA is implemented through the Nuclear Materials and Safeguards Management FSA and is responsible for the management and tracking of fissionable materials and supporting international non-proliferation agreements.

3.13.1 General Considerations

CNL's Nuclear Materials and Safeguards Management FSA meets the requirements of [REGDOC-2.13.1, Safeguards and Nuclear Material Accountancy](#) [83], REGDOC-2.4.3, *Nuclear Criticality Safety* [30], the [General Nuclear Safety and Control Regulations](#) [84], and other applicable legal and regulatory requirements.

3.13.2 Nuclear Accountancy and Control

Nuclear materials accounting at CNL is ensured through Physical Inventory Taking and using the Integrated Nuclear Materials Accounting System (INMAS). The Nuclear Materials and Safeguards Management FSA ensures that required accountancy information is submitted to CNSC staff and IAEA in accordance with prescribed timelines.

3.13.3 Access and Assistance to the IAEA

CNL provides access and assistance to the IAEA through requests from CNSC staff or from the IAEA directly depending on the type of inspection or safeguards activity being conducted. CNL ensures that knowledgeable staff and required resources, including any equipment or machinery to perform the scope of work indicated in the notification, are available for the duration of the verification activity.

3.13.4 Operational and Design Information

CNL provides Design Information Questionnaires to CNSC staff, an annual/quarterly submission of the Operation Program and updates to the additional protocol [85] using the IAEA Protocol Reporter. These submissions are reviewed by appropriate CNL staff to ensure the submissions are accurate.

3.13.5 Safeguards equipment, containment and surveillance

Where possible, CNL provides the resources necessary to install and protect IAEA safeguards equipment and all support services, including but not limited to Class III power, internet, heating, cooling and shelter.

3.14 Packaging and Transport

The Packaging and Transport SCA is implemented through CNL's Transportation of Dangerous Goods FSA and is responsible for developing and maintaining processes to ensure that all work involving the transportation and packaging of dangerous goods is performed consistently and in compliance with legal and regulatory requirements, including the:

- [Transportation of Dangerous Goods Regulations](#) [86].
- *Packaging and Transport of Nuclear Substances Regulations, 2015* [80].

CNL has standards that contain the information and guidance necessary to implement safe and uniform transportation of dangerous goods both on and off the WL site. CNL is requesting a Licence to Transport nuclear material shipments within the boundaries of the WL site be included in the WL site decommissioning licence, in Attachment B of [1].

Employees who are responsible for handling, receiving, or transporting dangerous goods at WL are adequately trained and hold valid training certificates or work under the direct supervision of a worker who has a training certificate.

3.14.1 Package Design and Maintenance

CNL has a procedure governing the procurement, storage, use, maintenance, decommissioning and disposal of transport packaging. All packaging used by WL is reviewed and approved by the Transportation of Dangerous Goods FSA prior to being procured or used. Changes to packaging are made in accordance with CNL's engineering change control process. When packaging designs require Competent Authority approval, the Transportation of Dangerous Goods FSA prepares and submits packaging certification requests and packaging certification renewals to the CNSC staff and Foreign Competent Authorities.

Maintenance for packaging is planned and executed under maintenance procedures by the Fitness for Service FSA and through normal operating processes used by the facility/organization. Packaging inspections are conducted at appropriate intervals depending on the complexity of the packaging, including prior to shipments, upon receipt of shipments, or annually through maintenance inspections.

3.14.2 Registration for Use

Upon receipt of a transport package design certificate (new or revised), the Transportation of Dangerous Goods FSA submits an [Application for Registration of Use to become Registered Users](#) [87].

3.15 Reporting

CNL maintains a strong reporting culture rooted in transparency, accountability, and timely communication. Regulatory reporting is governed by the *CNL Reporting to Regulatory Agencies* [88] procedure, which defines roles, responsibilities, and review requirements to ensure accurate and timely reporting across the organization. Through the application of this

procedure, CNL ensures full compliance with reporting requirements, including those in [REGDOC-3.1.2, Reporting Requirements, Volume I: Non-Power Reactor Class I Facilities and Uranium Mines and Mills](#) [89], as well as all reporting requirements defined in the WL LCH [23].

The reporting process includes review and approval of submissions, verification of completeness and accuracy, and mechanisms to ensure prompt notification of reportable events. Reportable events and regulatory commitments are tracked through CNL's corrective action program to ensure appropriate follow-up, resolution, and prevention of recurrence.

4. Closing

This supplementary report demonstrates that CNL has comprehensive programs to protect the environment, safeguard the health and safety of persons, and maintain national security while fulfilling Canada's international obligations. The information presented confirms that CNL has implemented robust management systems aligned with applicable legal and regulatory requirements and licence conditions, and clear evidence that CNL is fully qualified to continue conducting nuclear activities at WL safely and responsibly. In addition, the report demonstrates that CNL is proactively and transparently engaging with Indigenous Nations and the throughout the course of regular business and in support of licence renewal, ensuring that local and Indigenous perspectives are understood and considered early, consistent with the CNSC's emphasis on meaningful engagement as part of the broader licensing context.

5. Acronyms

AECL	Atomic Energy of Canada Limited
ALARA	As Low As Reasonably Achievable
CCSF	Concrete Canister Storage Facility
CNL	Canadian Nuclear Laboratories
CNSC	Canadian Nuclear Safety Commission
CRC	Curriculum Review Committee
CSA	Canadian Standards Association
EMP	Environmental Monitoring Program
EMS	Environmental Management System
EOC	Emergency Operations Centre
ERA	Environmental Risk Assessment
FNEP	Federal Nuclear Emergency Plan
FSA	Functional Support Area

GoCo	Government Owned, Contractor Operated
HLW	High-Level Waste
IA	Information Assets
IAEA	International Atomic Energy Agency
ILW	Intermediate-Level Waste
INPO	Institute of Nuclear Power Operations
IWC	Integrated Work Control
IWS	Integrated Waste Strategy
LCH	Licence Conditions handbook
LLW	Low-Level Waste
NCCA	Nuclear Criticality Controlled Area
NLPC	Nuclear Laboratory Partners of Canada
OSH	Occupational Safety and Health
RAT	Radiation Assessment Team
REGDOC	Regulatory Document
SAR	Safety Analysis Report
SAT	Systematic Approach to Training
SBWRS	Standpipe and Bunker Waste Retrieval System
SCA	Safety and Control Area
SSC	Structures, systems and components
WL	Whiteshell Laboratories
WLSRP	Whiteshell Laboratories Site Restoration Plan
WMA	Waste Management Area

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