

2024 February 15

WHITESHELL LABORATORIES RESTORATION PROJECT

Commission Registry
 Denis Saumure, Commission Registrar
 Canadian Nuclear Safety Commission
 280 Slater Street
 P.O. Box 1046, Station B
 OTTAWA, Ontario K1P 5S9

Dear Mr. Denis Saumure:

AMENDED APPLICATION FOR RENEWAL OF THE NUCLEAR RESEARCH AND TEST ESTABLISHMENT DECOMMISSIONING LICENCE FOR THE WHITESHELL LABORATORIES

On behalf of Canadian Nuclear Laboratories (CNL), I hereby make application for the renewal of the Nuclear Research and Test Establishment Decommissioning Licence for Whiteshell Laboratories (WL) (current licence – NRTEDL-W5-8.00/2024 expires 2024 December 31) [1]. This application is made in accordance with the requirements of the *Nuclear Safety and Control Act* [2] (hereafter – the Act) and the *General Nuclear Safety and Control Regulations* [3].

This application is submitted for consideration by Commission members for a three-year licence renewal period to commence on 2025 January 01, following expiry of licence NRTEDL-W5-8.00/2024 [1].

This application has been previously submitted to the Commission Registry on 2023 November 21 [4]. CNSC staff has performed a sufficiency check [5] and concluded that the amended application [6] adequately addresses CNSC staff comments [7]. The amended application is resubmitted to the CNSC Commission Registrar as requested [7].

Attachment A provides the updated clause-by-clause statements for relevant excerpts from the Act and relevant CNSC Regulations and describes how CNL meets these requirements as per the compliance verification criteria prescribed by CNSC in the current WL Licence Conditions Handbook [8]. The activities at the site over the proposed licence period are consistent with the current licence period activities per the current WL Licence [1] and Licence Conditions Handbook [8].

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CNL is and has always been committed to the protection of the environment, the health and safety of persons, and safe operation will always be the utmost priority for CNL. CNL will continue to maintain national security and implement international obligations, to which Canada has agreed.

Should you require any further information please contact me at 204-340-3044.

Yours sincerely,



K. Schruder for

Brian Wilcox

General Manager and Whiteshell Laboratories Site Licence Holder

Attachments (1)

REFERENCES:

- [1] Canadian Nuclear Safety Commission, *Whiteshell Laboratories, Nuclear Research and Test Establishment Decommissioning Licence*, NRTEDL-W5-8.00/2024, Expiry Date: 2024 December 31.
- [2] *Nuclear Safety and Control Act*, S.C. 1997, c. 9, Canada.
- [3] *General Nuclear Safety and Control Regulations* SOR/2000-202, Canada.
- [4] CNL Letter, B. Wilcox (CNL) to D. Saumure (CNSC), *Application for Renewal of the Nuclear Research and Test Establishment Decommissioning Licence for the Whiteshell Laboratories*, WLD-CNNO-23-0051-L (e-Doc 7171551), 2023 November 21.
- [5] CNSC Letter, K. Campbell (CNSC) to B. Wilcox (CNL), *CNSC Staff Review of CNL Application for Renewal of the Nuclear Research and Test Establishment Decommissioning Licence for the Whiteshell Laboratories (NRTEDL-W5-8.00/2024)*, WLD-NOCN-24-0001-L (e-Doc 7191956), 2024 January 05.
- [6] CNL Letter, B. Wilcox (CNL) to K. Campbell (CNSC), *Canadian Nuclear Laboratories Response to CNSC Staff Comments on the Application for Renewal of the Nuclear Research and Test Establishment Decommissioning Licence for the Whiteshell Laboratories*, WLD-CNNO-24-0004-L (e-Doc 7202949), 2024 January 15.
- [7] CNSC Letter, K. Campbell (CNSC) to B. Wilcox (CNL), *CNSC Staff Review of CNL Response Regarding Application for Renewal of the Nuclear Research and Test Establishment Decommissioning Licence for the Whiteshell Laboratories (NRTEDL-W5-8.00/2024)*, WLD-NOCN-24-0009-L (e-Doc 7217298), 2024 February 09.
- [8] Canadian Nuclear Safety Commission, *Licence Conditions Handbook for Whiteshell Laboratories*, NRTEDL-LCH-08.00/2024, Revision 1, 2023 April 03.

c:

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	J. McBrearty	R. Swartz	Registry/Greffe (CNSC/CCSN)

ATTACHMENT A. INFORMATION REQUIRED FOR LICENCE RENEWAL APPLICATION

Canadian Nuclear Laboratories (CNL) makes an application for the renewal of the Nuclear Research and Test Establishment Decommissioning Licence for Whiteshell Laboratories (WL), NRTEDL-W5-8.00/2024 [A-1] (the licence) which expires on 2024 December 31.

This attachment presents the information required by the *Nuclear Safety and Control Act* (the Act) [A-2] and CNSC Regulations made pursuant to the Act, to be included in an application for the renewal of a licence. Specifically, this Attachment provides clause-by-clause statements for relevant excerpts from the Act and CNSC Regulations and describes how CNL meets the requirements of the compliance verification criteria prescribed by CNSC in the current WL Licence Conditions Handbook (LCH) [A-3].

A.1 Nuclear Safety and Control Act

Section	Requirement	CNL Response
Nuclear Safety and Control Act		
24(2)	The Commission may issue, renew, suspend in whole or in part, amend, revoke, or replace a licence on receipt of an application (a) in the prescribed form;	This attachment with the letter provides the information required by the Act [A-2] and CNSC Regulations made pursuant to the Act and constitute, in part, an application by CNL to renew its licence [A-1].
24(2)	(b) containing the prescribed information and undertakings and accompanied by the prescribed documents; and	See response to item 24(2) (a) above.
24(2)	(c) accompanied by the prescribed fee.	CNL is in good standing with respect to the provision of CNSC licensing fees and will provide any additional fees, as and when required.
24(4)	No licence may be issued, renewed, amended or replaced unless, in the opinion of the Commission, the applicant (a) is qualified to carry on the activity that the licence will authorize the licensee to carry on; and	CNL understands that qualification will be determined through consideration by the Commission of this application and the associated supporting material as well as deliberation through the Commission hearing process.

Section	Requirement	CNL Response
24(4)	(b) will, in carrying on that activity, make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.	CNL understands that adequate provision will be determined through consideration by the Commission of this application and the associated supporting material as well as deliberation through the Commission public hearing process.
24(5)	A licence may contain any term or condition that the Commission considers necessary for the purposes of this Act, including a condition that the applicant provide a financial guarantee in a form that is acceptable to the Commission.	CNL understands the requirement for an acceptable financial guarantee. While ownership of CNL has transferred to the Canadian National Energy Alliance, Atomic Energy of Canada Ltd. (AECL) retains ownership of the lands, assets and liabilities associated with CNL's licences. These liabilities have been officially recognized by the Minister of Natural Resources in a letter dated 2015 July 31 [A-4] and this recognition was reaffirmed by AECL to CNL on 2020 August 12 [A-5].
25	The Commission may, on its own motion, renew, suspend in whole or in part, amend, revoke or replace a licence under the prescribed conditions.	CNL understands the clause and no response is required.

A.2 General Nuclear Safety and Control Regulations

Section	Requirement	CNL Response
General Nuclear Safety and Control Regulations		
3(1)	<p>An application for a licence shall contain the following information:</p> <p>(a) the applicant's name and business address</p>	<p>No change to name or business address as listed under Section II of the current licence.</p> <p><u>The applicant's name:</u> Canadian Nuclear Laboratories Ltd.</p> <p><u>Business address:</u> Canadian Nuclear Laboratories Ltd.</p> <p style="padding-left: 40px;">Chalk River Laboratories 286 Plant Road Chalk River, Ontario K0J 1J0</p> <p><u>Contact Person, Signing Authority and Site Licence Holder:</u> Name: Brian Wilcox General Manager and Whiteshell Laboratories Site Licence Holder Canadian Nuclear Laboratories Ltd. Whiteshell Laboratories 1 Ara Mooradian Way Pinawa, Manitoba, R0E 1L0 Phone 204-340-3044</p> <p><u>Official Language of Application:</u> English</p>
3(1)	(b) the activity to be licensed and its purpose	<p>Throughout the proposed period of the renewed licence, CNL intends to continue to conduct the licensed activities as outlined in the current Whiteshell Laboratories licence [A-1]:</p> <p>a) operate and decommission the Whiteshell Laboratories located in Pinawa, Province of Manitoba as further described in the WL LCH [A-3],</p>

Section	Requirement	CNL Response
General Nuclear Safety and Control Regulations		
		<p>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),</p> <p>c) possess, use, produce, and transfer prescribed equipment that is required for, associated with, or arises from the activities described in a),</p> <p>d) possess, use, and transfer prescribed information that is required for, associated with, or arises from the activities described in a),</p> <p>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).</p>
3(1)	(c) the name, maximum quantity and form of any nuclear substance to be encompassed by the licence	<p>No change to nuclear substances to be encompassed by the Whiteshell Laboratories licence [A-1].</p> <p>Three principal types of nuclear substances exist at WL:</p> <ul style="list-style-type: none"> • Heavy Water (Deuterium compounds and derivatives). Small residual amounts within WR-1 Moderator System. • Fissionable and Fertile Materials. Quantities of irradiated fissionable and fertile materials (e.g., thorium) are stored at WL, in solid forms. Solid unirradiated waste materials are also stored at WL. The maximum quantity of fissionable plus fertile materials encompassed by the site licence is 30 mega grams. • Sealed Sources. A sealed source registry is maintained at WL and is provided annually to the CNSC. <p>The name, maximum quantity, and form of nuclear substances permitted in each nuclear facility (Concrete Canister Storage Facility, Shielded Facilities, and Waste Management Area), or in components thereof, are given in the safety analysis reports.</p>

Section	Requirement	CNL Response
General Nuclear Safety and Control Regulations		
3(1)	(d) a description of any nuclear facility, prescribed equipment or prescribed information to be encompassed by the licence	<p>Relevant information on the nuclear facilities and prescribed equipment is presented in the CNL safety analysis reports for the following WL facilities: Concrete Canister Storage Facility, Shielded Facilities, and Waste Management Area (through the documents referenced in Safety Control Area (SCA) "Safety Analysis", Licence Condition 4.1 of the current WL LCH [A-3].</p> <p>Any specific required information that may be prescribed information will be provided to the Commission under separate cover, consistent with clause 21 (2) of the <i>General Nuclear Safety and Control Regulations</i> [A-6], which states that information made public is not prescribed information for the purposes of the Act [A-2].</p>
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	<p>Compliance with the <i>Radiation Protection Regulations</i> [A-7] at WL is ensured through implementation of the CNL Radiation Protection Program, through the documents referenced in SCA "Radiation Protection", Licence Condition 7.1 of the current WL LCH [A-3], and through implementation of the Environmental Protection Program, through the documents referenced in SCA "Environmental Protection", Licence Condition 9.1 of the current WL LCH [A-3].</p> <p>Compliance with the <i>Nuclear Security Regulations</i> [A-7] is ensured through implementation of the CNL Security Program and the CNL Cyber Security Program, through the documents referenced in SCA "Security", Licence Condition 12.1 of the current WL LCH [A-3].</p> <p>Compliance with the <i>Packaging and Transport of Nuclear Substances Regulations</i> [A-9] is ensured through implementation of the Transportation of Dangerous Goods Program, through the documents referenced in SCA "Packaging and Transport", Licence Condition 14.1 of the current WL LCH [A-3].</p>
3(1)	(f) any proposed action level for the purpose of section 6 of the <i>Radiation Protection Regulations</i>	Action levels for the WL site are defined under the Environmental Protection Program for air and liquid radioactive effluents, through the documents referenced in SCA "Environmental Protection"

Section	Requirement	CNL Response
General Nuclear Safety and Control Regulations		
		Licence Condition 9.1 of the current WL LCH [A-3], and the Radiation Protection Program, through the documents referenced in SCA "Radiation Protection" Licence Condition 7.1 of the current WL LCH [A-3].
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	Compliance with the <i>Nuclear Security Regulations</i> [A-7] is ensured through implementation the CNL Security Program and the CNL Cyber Security Program, through the documents referenced in SCA "Security", Licence Condition 12.1 of the current WL LCH [A-3].
3(1)	(i) a description and the results of any test, analysis or calculation performed to substantiate the information included in the application;	Substantiation of the information included with this application is demonstrated through the implementation of annual reporting requirements as defined in Licence Condition 3.2 of the current WL LCH [A-3]. Annual reports are prepared, as required, to cover both nuclear facility and program performance areas.
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 is presented in the annual reports prepared to meet the requirement of SCA "Operating Performance" Licence Condition 3.2 of the current WL LCH [A-3]. Relevant requirements for managing and disposing of radioactive and hazardous waste at the WL site are addressed in the Waste Management Program (through the documents referenced in SCA "Waste Management" Licence Condition 11.1 of the current WL LCH [A-3].
3(1)	(k) the applicant's organizational management structure insofar as it may bear on the applicant's compliance with the Act and the	CNL's senior management organizational structure for the operation of WL is documented in the Management System manual [A-10].

Section	Requirement	CNL Response
General Nuclear Safety and Control Regulations		
	regulations made under the Act, including the internal allocation of functions, responsibilities and authority;	Further relevant information regarding responsibilities and authority at the WL site is provided in lower tier Management System documents. As per the requirements of SCA “Management System” Licence Condition 1.1 of the WL LCH [A-3], further relevant information regarding the responsibilities and authority at the WL site is provided in <i>Site Licences, Certificates, Permits, Building/Facility Contacts, & Licence Representatives</i> [A-11].
3(1)	(l) a description of any proposed financial guarantee relating to the activity to be licensed; and	CNL understands the requirement for an acceptable financial guarantee. While ownership of CNL has transferred to Canadian National Energy Alliance, AECL retains ownership of the lands, assets and liabilities associated with CNL’s licences. These liabilities have been officially recognized by the Minister of Natural Resources in a letter dated 2015 July 31 [A-4] and reaffirmed in 2020 [A-5], as per Licence Condition G.3 of the current WL LCH [A-3].
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.	An annual summary report of compliance monitoring and operational performance is submitted to CNSC staff, to meet the requirement of SCA “Operating Performance” Licence Condition 3.2 of the current WL LCH [A-3]. This report provides information on operational practices, maintenance of the facilities and the laboratories, and presents a summary of performance for each of the Safety and Control Areas.
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	The information is provided under Section 3(1) (please see above) of the <i>General Nuclear Safety and Control Regulations</i> [A-6].
5	(b) a statement identifying the changes in the information that was previously submitted.	No changes to the existing terms and conditions of the current WL Licence [A-1] or to the associated WL LCH [A-3] are being requested.

Section	Requirement	CNL Response
General Nuclear Safety and Control Regulations		
7	An application for a licence or for the renewal, suspension in whole or in part, amendment, revocation or replacement of a licence may incorporate by reference any information that is included in a valid, expired or revoked licence.	The licensed activities from the current WL licence [A-1] are expected to continue throughout the proposed period of the new licence as listed in the response above to clause 3 (b). Additionally, the system of programs and processes that are effective for the current licence [A-1] is maintained to meet the requirements of the 14 various Safety and Control Areas, as prescribed in the current WL LCH [A-3]. These constitute the licensing basis for the current licence [A-1], and will continue to be implemented throughout the term of the proposed renewed licence in order to assure the continuation of safe practices at the WL site. The establishment, maintenance (including continuous improvement) and functional support requirements of these programs and processes are governed by the Management System as per the Management System manual [A-10] and lower tier documents.
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 (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	CNL's senior management organizational structure for the operation of WL is documented in the Management System manual [A-10]. Further relevant information regarding responsibilities and authority at the WL site is provided in lower tier Management System documents.
15	(c) any change in the information referred to in paragraphs (a) and (b), within 15 days after the change occurs.	The Clause is understood, and no response is required.

A.3 Class I Nuclear Facilities Regulations

Section	Requirement	CNL Response
Class I Nuclear Facilities Regulations		
3	<p>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>:</p> <p>(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;</p>	<p>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 [A-3], in the Facility Authorization documents for the following WL nuclear facilities: Concrete Canister Storage Facility, Shielded Facilities, and Waste Management Area (through the Facility Authorization documents referenced in Licence Condition 3.1 of the current WL LCH [A-3]), and facility-specific safety analysis reports for the same WL facilities (through documents referenced in SCA "Safety Analysis", Licence Condition 4.1 of the current WL LCH [A-3]). Information on the site characteristics is presented in the individual safety analysis reports.</p>
3	<p>(b) plans showing the location, perimeter, areas, structures and systems of the nuclear facility;</p>	<p>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 [A-3], and 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 [A-3]).</p>
3	<p>(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;</p>	<p>As identified in the letter [A-12], AECL maintains the ownership of the WL property and authorizes CNL to conduct licensed activities at the site.</p>
3	<p>(d) the proposed management system for the activity to be licensed, including measures to promote and support safety culture;</p>	<p>CNL's Management System program is documented in the CNL Management System manual [A-10] and lower tier documents through the documents referenced in SCA "Management System" Licence Condition 1.1 of the current WL LCH [A-3] and complies with the <i>Class I Nuclear Facilities Regulations</i> [A-13].</p>

Section	Requirement	CNL Response
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.	Compliance with the requirements for human performance at WL is ensured through implementation of the Performance Assurance Program through the documents referenced in SCA "Human Performance Management", Licence Condition 2.1: Human Performance Program of the WL LCH [A-3].
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;	<p>Hazardous substances that are on the WL site include:</p> <ul style="list-style-type: none"> • Asbestos-Containing Materials (ACM) (e.g., pipe insulation, parging, vermiculite, vinyl-asbestos floor tiles, asbestos cement ceiling tiles, asbestos cement pipes); • Polychlorinated Biphenyls (PCBs) (e.g., fluorescent light ballasts, residuals from transformers, capacitors, etc.); • Lead (e.g., elemental lead shielding, lead-based paints, spent bullets in security guard firing ranges, batteries); • Mercury (e.g., elemental residuals from laboratories or as stored wastes, in fluorescent light tubes, electrical switches or thermostats); • Mould (e.g., in poorly ventilated crawl spaces and basements); • Hydrocarbons (e.g., from historical fuelling spills or tank residuals); • Organic reactor coolant (HB-40 also known as OS-84) (e.g., residual liquid or tar-like residues, coatings on piping, structures, etc.); • Hanta-virus-containing animal droppings (e.g., from deer mice); • Chlorine gas or residuals from water treatment systems; • Glycol, freons and other ozone-depleting substances (ODS) from chillers, air-conditioning systems, etc.; • Quantities of DDT, arsenic, metallic beryllium, (wet) uranium carbide reactor fuel, various ion-exchange column resins, etc. and traces of several toxic metals are located in various waste management structures; and • Tritium, xylene, gadolinium nitrates, and boron-containing substances, located throughout the WR-1 reactor building. <p>More detailed information on these hazardous substances in a specific facility or building is captured in the WL Detailed Decommissioning Plan</p>

Section	Requirement	CNL Response
Class I Nuclear Facilities Regulations		
		<p>(DDP), Volume 1 - Program Overview [A-14], in DDP Volumes 2 through 12 as documented in the Program Overview DDP [A-14], and in lower-level decommissioning documentation.</p> <p>It is also to be noted that most of these hazardous substances have been encountered in previous decommissioning projects at WL and have all been safely dealt with through existing or specially created handling procedures.</p>
3	(f) the proposed worker health and safety policies and procedures;	Compliance with the requirements for worker health and safety at WL is ensured through implementation of the Occupational Safety and Health Program, through the documents referenced in SCA "Conventional Health and Safety" Licence Condition 8.1 of the current WL LCH [A-3].
3	(g) the proposed environmental protection policies and procedures;	Compliance with the requirements for environmental protection at WL is ensured through implementation of the Environmental Protection Program, through the documents referenced in SCA "Environmental Protection", Licence Condition 9.1 of the current WL LCH [A-3].
3	(h) the proposed effluent and environmental monitoring programs;	See response to clause 3(g) above.
3	(i) if the application is in respect of a nuclear facility referred to in paragraph 2(b) of the <i>Nuclear Security Regulations</i> , the information required by section 3 of those Regulations;	Not applicable.
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	Compliance with the requirements for notification to local residents and associated activities is ensured through implementation of the Public Information Program, through the documents referenced in Licence Condition G.4 of the current WL LCH [A-3]. Additional compliance is ensured through the Emergency Preparedness Program, through the documents referenced in SCA "Emergency Management and Fire Protection" Licence Condition 10.1 of the current WL LCH [A-3].

Section	Requirement	CNL Response
Class I Nuclear Facilities Regulations		
3	(k) the proposed plan for the decommissioning of the nuclear facility or of the site.	The plan for the decommissioning of the site is captured in the WL Detailed Decommissioning Plan, Volume 1 – Program Overview [A-14] and DDP Volumes 2 through 12 as documented in the Program Overview DDP [A-14].
7	<p>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 (CINFR):</p> <p>(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;</p> <p>(b) the nuclear substances, hazardous substances, land, buildings, structures, systems and equipment that will be affected by the decommissioning;</p> <p>(c) the proposed measures, methods and procedures for carrying on the decommissioning;</p>	The proposed plan for the decommissioning of the site is captured in the WL Detailed Decommissioning Plan, Volume 1 – Program Overview [A-14], and DDP Volumes 2 through 12 as documented in the Program Overview DDP [A-14].
7	(d) the proposed measures to facilitate Canada’s compliance with any applicable safeguards agreement;	Compliance with the requirements for safeguards at WL is ensured through implementation of the Nuclear Materials and Safeguards Management Program, through the documents referenced in SCA “Safeguards and Non-Proliferation” Licence Condition 13.1 of the current WL LCH [A-3].
7	(e) the nature and extent of any radioactive contamination at the nuclear facility;	This information is presented in the WL Detailed Decommissioning Plan, Volume 1 – Program Overview [A-14].

Section	Requirement	CNL Response
Class I Nuclear Facilities Regulations		
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;	The required information is provided in the Comprehensive Study Report [A-15] on the decommissioning of Whiteshell Laboratories. The measures that will be taken to prevent or mitigate these effects are described within the Environmental Protection Program, through the documents referenced in SCA "Environmental Protection" Licence Condition 9.1 of the current WL LCH [A-3], and within the Occupational Safety and Health Program, through the documents referenced in SCA "Conventional Health and Safety" Licence Condition 8.1 of the current WL LCH [A-3].
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;	Compliance is ensured through implementation of the Environmental Protection Program, through the documents referenced in SCA "Environmental Protection" Licence Condition 9.1 of the current WL LCH [A-3].
7	(h) the proposed measures to control releases of nuclear substances and hazardous substances into the environment;	Compliance is ensured through implementation of the Environmental Protection Program, through the documents referenced in SCA "Environmental Protection" Licence Condition 9.1 of the current WL LCH [A-3].

Section	Requirement	CNL Response
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;	<p>The required information is provided in the Comprehensive Study Report on the decommissioning of Whiteshell Laboratories [A-15] and in the annual reports prepared to meet the requirement of SCA “Operating Performance” Licence Condition 3.2 of the current WL LCH [A-3].</p> <p>Information on these topics is also provided in relevant aspects of the following:</p> <ul style="list-style-type: none"> • Environmental Protection Program, through the documents referenced in SCA “Environmental Protection” Licence Condition 9.1 of the current WL LCH [A-3]. • Occupational Safety and Health Program, through the documents referenced in SCA “Conventional Health and Safety” Licence Condition 8.1 of the current WL LCH [A-3]. • Physical Security Program, through the documents referenced in SCA “Security” Licence Condition 12.1 of the current WL LCH [A-3]. • Emergency Preparedness Program, through the documents referenced in SCA “Emergency Management and Fire Protection” Licence Condition 10.1 of the current WL LCH [A-3]. • Safety Analysis Program, through the documents referenced in SCA “Safety Analysis” Licence Condition 4.1 of the current WL LCH [A-3]. • Nuclear Criticality Safety Program, through the documents referenced in SCA “Safety Analysis” Licence Condition 4.2 of the current WL LCH [A-3].
7	(j) the proposed qualification requirements and training program for workers; and	Compliance with the requirements for training and qualification at WL is ensured through implementation of SCA “Human Performance Management” Licence Conditions 2.1 and 2.2 of the WL LCH [A-3].
7	(k) a description of the planned state of the site on completion of the decommissioning.	The CNL plans to decommission all of WL to its final end-state as documented in the WL Detailed Decommissioning Plan, Volume 1 – Program Overview [A-14], with further details to be documented in the Land-Use and End-State Plan, are planned to be finalized in the next licence period.

A.4 Nuclear Security Regulations

Section	Requirement	CNL Response
Nuclear Security Regulations		
3	<p>An application for a licence in respect of Category I or II nuclear material, other than a licence to transport, and an application for a licence in respect of a nuclear facility referred to in paragraph 2(b) shall contain the following information in addition to the information required by section 3 of the Nuclear Substances and <i>Radiation Devices Regulations</i> or sections 3 to 8 of the <i>Class I Nuclear Facilities Regulations</i>, as applicable:</p> <p>(a) a copy of the arrangements referred to in section 35;</p> <p>(b) the site plan referred to in section 16;</p> <p>(c) a description of the proposed security equipment, systems and procedures;</p> <p>(d) a description of the proposed on-site and off-site communications equipment, systems and procedures;</p> <p>(e) a description of the proposed structure and organization of the nuclear security officer service, including the duties, responsibilities and training of nuclear security officers;</p> <p>(f) the proposed plan and procedures to assess and respond to breaches of security; and</p> <p>(g) the current threat and risk assessment.</p>	<p>Compliance with the requirements regarding security of Category I or II nuclear material or nuclear facilities is ensured through implementation of the:</p> <ul style="list-style-type: none"> • Physical Security Program, through the documents referenced in SCA “Security” Licence Condition 12.1 of the current WL LCH [A-3]. • Radiation Protection Program, through the documents referenced in SCA “Radiation Protection” Licence Condition 7.1 of the current WL LCH [A-3]. • Nuclear Materials and Safeguards Management Program, through the documents referenced in SCA “Safeguards and Non-Proliferation” Licence Condition 13.1 of the current WL LCH [A-3]. <p>Any applicable material would be considered as prescribed information for the purposes of the act and no specific details are provided in this document.</p> <p>Note: There is no Category I nuclear material at the WL site.</p>

Section	Requirement	CNL Response
Nuclear Security Regulations		
4	An application for a licence in respect of Category III nuclear material, other than a licence to transport, shall contain, in addition to the information required by section 3 of the <i>Nuclear Substances and Radiation Devices Regulations</i> , a description of the measures to be taken to ensure compliance with subsection 7(3) and sections 7.1 and 7.2.	<p>Compliance with the requirements regarding security of Category III nuclear material is ensured through implementation of the:</p> <ul style="list-style-type: none"> • Physical Security Program, through the documents referenced in SCA “Security” Licence Condition 12.1 of the current WL LCH [A-3]. • Radiation Protection Program, through the documents referenced in SCA “Radiation Protection” Licence Condition 7.1 of the current WL LCH [A-3]. • Nuclear Materials and Safeguards Management Program, through the documents referenced in SCA “Safeguards and Non-Proliferation” Licence Condition 13.1 of the current WL LCH [A-3]. <p>Any applicable material would be considered as prescribed information for the purposes of the Act and no specific details are provided in this document.</p>
41	An application for a licence in respect of a nuclear facility shall contain, in addition to the information required by sections 3 to 8 of the <i>Class I Nuclear Facilities Regulations</i> , a description of the physical protection measures to be taken to ensure compliance with sections 42 to 48.	Compliance with the requirements for the provision of an off-site response force is ensured through implementation of the Physical Security Program, through the documents referenced in SCA “Security” Licence Condition 12.1 of the current WL LCH [A-3], and the Emergency Preparedness Program, through the documents referenced in SCA “Emergency Management and Fire Protection” Licence Condition 10.1 of the current WL LCH [A-3].

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- [A-1] Canadian Nuclear Safety Commission, *Whiteshell Laboratories, Nuclear Research and Test Establishment Decommissioning Licence*, NRTEDL-W5-8.00/2024, Expiry Date: 2024 December 31.
- [A-2] *Nuclear Safety and Control Act*, S.C. 1997, c. 9, Canada.
- [A-3] Canadian Nuclear Safety Commission, *Licence Conditions Handbook for Whiteshell Laboratories*, NRTEDL-LCH-08.00/2024, Revision 1, 2023 April 03.
- [A-4] 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.
- [A-5] Letter, P. Boyle (CNL) to K. Murthy (CNSC), *Submission of Information Regarding Financial Guarantees for All Atomic Energy of Canada Limited Sites Operated by Canadian Nuclear Laboratories*, 145-CNNO-20-0028-L, 2020 August 25.
- [A-6] *General Nuclear Safety and Control Regulations*, SOR/2000-202, Canada.
- [A-7] *Radiation Protection Regulations*, SOR/2000-203, Canada.
- [A-8] *Nuclear Security Regulations*, SOR/2000-209, Canada.
- [A-9] *Packaging and Transport of Nuclear Substances Regulations*, SOR/2015-145, Canada.
- [A-10] *Management System – Manual*, 900-514100-MAN-001, [12489834](#).
- [A-11] *Site Licences, Certificates, Permits, Building/Facility Contacts, & Licence Representatives*, 900-514300-LST-001, [49255143](#).
- [A-12] Amrouni, J.-C. (AECL), Letter to Howden, B.D. (Atomic Energy Control Board), *WL Deed*, JCA-00-034, 2000 May 02.
- [A-13] *Class I Nuclear Facilities Regulations*, SOR/2000-204, Canada.
- [A-14] *Whiteshell Laboratories Detailed Decommissioning Plan – Volume 1 – Program Overview*, WLDP-02000-DDP-001, Revision 2, 2021 (Revision 3, 2023 October, has been submitted to CNSC staff for acceptance).
- [A-15] *Whiteshell Laboratories Decommissioning Project Comprehensive Study Report, Volume 1: Main Report, Volume 2: Appendices, Volume 3: Addendum*, WLDP-03702-041-000, 2001.