



UNPROTECTED/NON PROTÉGÉ

**ORIGINAL**

**CMD: 18-H103**

**Date signed/Signé le : APRIL 19, 2018**

A Licence Renewal

Un renouvellement de permis

**Canadian Nuclear  
Laboratories**

**Laboratoires Nucléaires  
Canadiens**

**Whiteshell Laboratories**

**Laboratoires de  
Whiteshell**

Hearing in writing based solely on  
written submissions

Audience fondée uniquement sur des  
mémoires

Scheduled for:

May 2018

Prévue pour :

Mai 2018

Submitted by:

CNSC Staff

Soumise par :

Le personnel de la CCSN

**Summary**

This CMD presents information about the following matters of regulatory interest with respect to Canadian Nuclear Laboratories (CNL):

- CNL's application to renew the Whiteshell Laboratories Decommissioning Licence for a one-year period to December 31, 2019, with the same terms and conditions as the current licence.

CNSC staff recommend the Commission take the following actions:

- Accept CNL's request for a one-year licence renewal with no changes to the activities authorized.
- Issue Whiteshell Laboratories Decommissioning Licence NRTEDL-W5-8.05/2019 that remains valid until December 31, 2019.

The following items are attached:

- Proposed licence NRTEDL-W5-8.05/2019
- Current licence NRTEDL-W5-8.04/2018

**Résumé**

Le présent CMD présente de l'information sur un ensemble de questions d'ordre réglementaire concernant les Laboratoires Nucléaires Canadiens (LNC) :

- Demande des LNC concernant le renouvellement du permis de déclasserment des Laboratoires de Whiteshell pour une période d'un an, jusqu'au 31 décembre 2019, avec les mêmes modalités et conditions que le permis actuel.

La Commission pourrait considérer prendre les mesures suivantes :

- Accepter la demande des LNC concernant le renouvellement de permis pour une durée d'un an, sans changement aux activités autorisées.
- Délivrer le permis de déclasserment des Laboratoires de Whiteshell, NRTEDL-W5-8.05/2019, qui sera valide jusqu'au 31 décembre 2019.

Les pièces suivantes sont jointes :

- Permis proposé NRTEDL-W5-8.05/2019.
- Permis actuel NRTEDL-W5-8.04/2018

**Signed/Signé le**

April 19, 2018



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Haidy Tadros

**Director General**

Directorate of Nuclear Cycle and Facilities Regulation

**Directrice générale de la**

Direction de la réglementation du cycle et des installations nucléaires

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## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1. OVERVIEW.....</b>	<b>2</b>
1.1 Background .....	2
1.2 Highlights.....	3
<b>2. MATTERS FOR CONSIDERATION .....</b>	<b>3</b>
2.1 Environmental Assessment .....	3
2.2 Other Matters of Regulatory Interest .....	4
<b>3. OTHER MATTERS OF REGULATORY INTEREST.....</b>	<b>4</b>
3.1 Aboriginal Consultation.....	4
3.2 Cost Recovery .....	5
3.3 Financial Guarantees .....	5
3.4 Participant Funding Program.....	5
<b>4. OVERALL CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>5</b>
<b>REFERENCES .....</b>	<b>6</b>
<b>PROPOSED LICENCE.....</b>	<b>7</b>
<b>CURRENT LICENCE.....</b>	<b>9</b>

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## EXECUTIVE SUMMARY

CNL requested [1] that the Whiteshell Laboratories Nuclear Research and Test Establishment Decommissioning Licence NRTEDL-08.04/2018 [2] be renewed for a one year period ending December 31, 2019.

CNL has requested this licence renewal in order to ensure that they have adequate time to address comments on the draft Environmental Impact Statement (EIS) for the *in-situ* decommissioning of the WR-1 reactor that were raised by the public, First Nations, Métis communities and regulators according to the requirements of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012).

CNSC staff have reviewed the licence application and have determined that the changes are administrative in nature, and no changes to the existing authorized activities, terms or conditions, or to the Licence Conditions Handbook (LCH) [3] are being requested.

CNSC staff have prepared the proposed draft licence [4] for the Commission's consideration, and have attached a copy of the current licence.

# 1. OVERVIEW

## 1.1 Background

CNL is authorized to decommission the Whiteshell Laboratories (WL), comprising both nuclear and non-nuclear facilities under a CNSC issued Nuclear Research and Test Establishment Decommissioning Licence NRTEDL-08.04/2018.

WL encompasses an area of 4,375 hectares and includes facilities such as the Whiteshell Reactor (WR-1), the shielded facilities, the radioactive waste management facilities and structures, the concrete canister storage area and various research laboratories and support buildings. WL operated as a nuclear research facility for approximately 40 years (WR-1 for 20 years) under an operating licence issued by the Atomic Energy Control Board. Atomic Energy of Canada Limited (the former licensee) applied for and was granted a decommissioning licence in 2002.

Since 2002, significant decommissioning progress has been made with activities including: demolition of redundant buildings, continued decommissioning of the main research building, severing or redirecting services where necessary, construction of new enabling facilities, repurposing of buildings to support decommissioning and initiating subsurface investigations into the conditions of various containment structures inside the waste management area.

### CNL's Licensing Request

CNL's current decommissioning licence NRTEDL-W5-8.04/2018 remains valid until December 31, 2018. In September 2017, CNL submitted an application to renew the WL decommissioning licence for a 10-year period. With that, CNL requested that the decommissioning approach for the WR-1 reactor be changed to *in-situ* decommissioning from dismantlement. CNL's proposal to conduct *in-situ* decommissioning of the WR-1 reactor triggered the requirement for an environmental assessment (EA) under the CEAA, 2012.

As part of the CEAA 2012 process, CNL has determined they need additional time to address the large number of comments raised by the public, First Nations, Métis communities and regulators in relation to the draft EIS that was developed in support of the EA.

Consequently, on March 13, 2018, CNL requested [1] that the Commission renew their existing licence for a one-year period ending December 31, 2019, under the same terms and conditions as the current licence. This short-term renewal request is considered administrative, as no changes to the terms, conditions and licensed activities are being proposed.

### Licensing History

The decommissioning licence was first issued by the Commission in November 2002 for a six-year period. This was followed by the Commission renewing the licence in December 2008 for a ten-year period.



Licence amendments were approved by the Commission in 2010 and 2012 to reflect requested changes in report submission dates, reference documents and action levels. In October 2014, the Commission approved the transfer of the licence from AECL to CNL under the Government Owned Contractor Operated (GOCO) model.

In January 2016, the Commission approved a licence amendment that revised the licence to the updated format with an associated LCH.

### Performance

CNSC staff conduct ongoing regulatory oversight and compliance verification activities at Whiteshell. Regular updates on licensee performance and project status have and will continue to be brought to the Commissions' attention via regulatory operations reports (RORs) at public meetings.

In relation to interim reporting, CNSC staff have kept the Commission informed of the status of decommissioning in 2012 (interim status report), 2014 (annual performance report) and in 2016 (status report). CNSC staff will next update the Commission on the status of WL in a progress report to be presented in August 2018 during a public meeting.

## **1.2 Highlights**

CNSC staff developed the proposed licence from the existing licence issued in 2016. All terms and conditions of the licence remain unchanged with the exception of the licence number and the proposed expiry date of December 31, 2019.

## **2. MATTERS FOR CONSIDERATION**

### **2.1 Environmental Assessment**

CNSC staff have reviewed CNL's application for licence renewal under the NSCA and have concluded that, given there are no proposed changes in activities for the proposed licence renewal, there are no impacts to the environment or any of the 14 Safety and Control Areas (SCAs).

## 2.2 Other Matters of Regulatory Interest

The following table identifies other matters that are relevant to this CMD.

OTHER MATTERS OF REGULATORY INTEREST	
Area	Relevant to this CMD?
Aboriginal Consultation	Yes
Other Consultation	No
Cost Recovery	Yes
Financial Guarantees	Yes
Improvement Plans and Significant Future Activities	No
Licensee's Public Information Program	No
Nuclear Liability Insurance	No
Participant Funding Program	Yes

## 3. OTHER MATTERS OF REGULATORY INTEREST

### 3.1 Aboriginal Consultation

This licence renewal application is administrative in nature and proposes no changes to the terms and conditions of the licence or changes to the LCH. There will be no new impacts, from this facility or from the proposed licence renewal of one year. No impacts to potential or established Aboriginal and/or treaty rights are anticipated and there is therefore no duty to consult in relation to this licence renewal.

CNSC staff discussed the possibility of a short-term licence renewal in a meeting with the Chief and some council members of the Sagkeeng First Nation on March 19, 2018, in Winnipeg. In relation to the short-term licence renewal, the Sagkeeng First Nation requested further discussions with CNL and CNSC staff to share information on how the Sagkeeng will continue to be engaged on the Whiteshell decommissioning project. CNSC staff are committed to continue structured and focused engagement and consultation activities with all potentially impacted First Nations and Métis communities regarding the proposed WR-1 *in-situ* decommissioning approach. The collection of traditional knowledge and land use information will continue over the proposed renewed licence term.

In relation to environmental monitoring, CNSC staff worked with the Sagkeeng First Nation in the sampling of a Northern Pike from the Winnipeg River, caught downstream from the WL. This will shortly be published on the CNSC's Independent Environmental Monitoring Program web page. CNSC staff will continue to work with Indigenous communities in future sampling campaigns to ensure that meaningful results are obtained.

### 3.2 Cost Recovery

A Class I licensed nuclear facility is subject to the requirements of Part 2 of the CNSC *Cost Recovery Fees Regulations* (CRFR). CNSC staff have concluded that CNL is compliant with the CNSC's CRFR for the WL.

### 3.3 Financial Guarantees

With respect to a financial guarantee required by the paragraph 3(1)(l) of the *General Nuclear Safety and Control Regulations* (GNSCR), CNSC Regulatory Document, G-206, *Financial Guarantees for the Decommissioning of Licensed Activities*, (2000) states that an expressed commitment from a federal or provincial government is an acceptable form of financial guarantee.

This commitment was last expressed to the CNSC in a letter from the Federal Minister of Natural Resources to Dr. Binder dated July 31, 2015 [5].

This letter states that AECL will retain ownership of the lands, assets and liabilities associated with CNL's licences, including the Whiteshell Licence, and states that the liabilities of AECL are the liabilities of Her Majesty in Right of Canada.

CNSC staff confirm that adequate financial guarantees are in place at WL.

### 3.4 Participant Funding Program

Due to the administrative nature of this licence renewal, the application will be considered through a hearing in writing based on written submissions with no opportunity for the public to intervene.

Participant funding has already been offered for the WR-1 decommissioning proposal, and the related EA process and the 10 year licence renewal hearing. This one-year licence renewal would give funding recipients additional time to work on their deliverables, including traditional knowledge and land use studies. For these reasons, participant funding is not appropriate to offer in relation to this licence renewal application.

## 4. OVERALL CONCLUSIONS AND RECOMMENDATIONS

With respect to paragraphs 24(4)(a) and (b) of the NSCA, CNSC staff have concluded that the licensee:

- Is qualified to carry on the activities authorized by the licence; and,
- Will, in carrying out 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.

CNSC staff recommend that pursuant to section 24 of the NSCA, the Commission issue NRTEDL-W5-8.05/2019 that remains valid until December 31, 2019.

## REFERENCES

- [1] Letter, D. Coyne to M. Leblanc, Application for Renewal of the Whiteshell Laboratories Decommissioning Licence, NRTEDL-W5-8.04/2018, dated March 13, 2018 (e-Doc 5481720).
- [2] NRTEDL-W5-8.04/2018, Nuclear Research and Test Establishment Decommissioning Licence (e-Doc 4898022).
- [3] Licence Conditions Handbook for Whiteshell Laboratories, Revision 0, dated February 1, 2016 (e-Doc 4898027).
- [4] Draft NRTEDL-W5-8.05/2019, Nuclear Research and Test Establishment Decommissioning Licence (e-Doc 5482676).
- [5] Letter, Honourable G. Rickford to Dr. M. Binder, dated July 31, 2015 (e-Doc 4815864).

## PROPOSED LICENCE

e-Doc 5482676 (Word)

e-Doc 5492696 (PDF)

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## NUCLEAR RESEARCH AND TEST ESTABLISHMENT DECOMMISSIONING LICENCE

### WHITESHELL LABORATORIES

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- I) **LICENCE NUMBER:** **NRTEDL-W5-8.05/2019**
- II) **LICENSEE:** Pursuant to section 24 of the *Nuclear Safety and Control Act*, this licence is issued to
- Canadian Nuclear Laboratories Limited**  
**286 Plant Road**  
**Chalk River, Ontario**  
**K0J 1J0**
- III) **LICENCE PERIOD:** This licence is valid from the date signed and remains in effect until December 31, 2019, unless otherwise suspended, amended, revoked or replaced.
- IV) **LICENSED ACTIVITIES:**
- This licence authorizes the licensee to:
- a) operate and decommission the Whiteshell Laboratories (hereinafter “WL”) located in Pinawa, Province of Manitoba as further described in the Whiteshell Laboratories *Licence Conditions Handbook* (LCH) ,
  - b) produce, possess, process, refine, transfer, use, package, manage, import, export 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).

**V) EXPLANATORY NOTES:**

- (i) Nothing in this licence shall be construed to authorize non-compliance with any other applicable legal obligation or restriction.
- (ii) Unless otherwise provided for in this licence, words and expressions used in this licence have the same meaning as in the *Nuclear Safety and Control Act* and associated Regulations.
- (iii) The Whiteshell Laboratories Licence Conditions Handbook (LCH) provides compliance verification criteria used to meet the conditions of this licence. The LCH also provides information regarding delegation of authority and applicable versions of documents.

**VI) CONDITIONS:**

**1 GENERAL**

1.1 The licensee shall conduct the activities described in Part IV of this licence in accordance with the licensing basis, defined as:

- (i) the regulatory requirements set out in the applicable laws and regulations
- (ii) the conditions and safety and control measures described in the facility's or activity's licence and the documents directly referenced in that licence
- (iii) the safety and control measures described in the licence application and the documents needed to support that licence application

unless otherwise approved in writing by the Canadian Nuclear Safety Commission (hereinafter "the Commission").

1.2 The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.

1.3 The licensee shall give written notification of changes to the facility or its operation, including deviation from design, operating conditions, policies, programs and methods referred to in the licensing basis.

1.4 The licensee shall ensure that every contractor working at the facility complies with this licence.

1.5 The licensee shall maintain a financial guarantee for decommissioning that is acceptable to the Commission.



- 1.6 The licensee shall comply with all commitments defined in the NRTEDL-W5-8.04/2018 LCH.
- 1.7 The licensee shall implement and maintain a public information and disclosure program.
- 1.8 The licensee shall implement and report on the progress of the Environmental Assessment Follow-Up Program.

## **2 DECOMMISSIONING**

- 2.1 The licensee shall conduct decommissioning activities in accordance with Volumes 1 to 12 of the Whiteshell Laboratories Detailed Decommissioning Plan.
- 2.2 The licensee shall implement and maintain decommissioning policies, programs and procedures.
- 2.3 The licensee shall not make modifications to, or deviate from the design, operating conditions, purposes, methods, procedures or limits described in the safety analysis reports and/or operational limits and conditions documents that would result in an impact on health, safety or the environment that is different in nature or greater in magnitude or probability than that described in those documents without prior approval of the Commission or a person authorized by the Commission.
- 2.4 The licensee shall submit the project design requirements for construction of the approved second SMAG storage building prior to the commencement of construction activities described in paragraph e) of Part IV of this licence.
- 2.5 The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that relate to the completed construction activities in paragraph e) of Part IV of this licence for the approved second SMAG storage building until the submission of a commissioning report that is acceptable to the Commission.

## **3 SAFETY AND CONTROL AREA LICENCE CONDITIONS**

### **MANAGEMENT SYSTEM**

- 3.1 The licensee shall implement and maintain a management system.

## **4 HUMAN PERFORMANCE MANAGEMENT**

- 4.1 The licensee shall implement and maintain a human performance program.
- 4.2 The licensee shall implement and maintain a training program.

## **5 OPERATING PERFORMANCE**

- 5.1 The licensee shall implement and maintain a program for reporting to the Commission or a person authorized by the Commission.

## **6 SAFETY ANALYSIS**

- 6.1 The licensee shall implement and maintain a safety analysis program.
- 6.2 The licensee shall implement and maintain a nuclear criticality safety program.

## **7 PHYSICAL DESIGN**

- 7.1 The licensee shall implement and maintain a design program.
- 7.2 The licensee shall implement and maintain a pressure boundary program.

## **8 FITNESS FOR SERVICE**

- 8.1 The licensee shall implement and maintain a fitness for service program.

## **9 RADIATION PROTECTION**

- 9.1 The licensee shall implement and maintain a radiation protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days.

## **10 CONVENTIONAL HEALTH AND SAFETY**

- 10.1 The licensee shall implement and maintain a conventional health and safety program.

## **11 ENVIRONMENTAL PROTECTION**

- 11.1 The licensee shall implement and maintain an environmental protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days.

## **12 EMERGENCY MANAGEMENT AND FIRE PROTECTION**

- 12.1 The licensee shall implement and maintain an emergency preparedness program.
- 12.2 The licensee shall implement and maintain a fire protection program.

**13 WASTE MANAGEMENT**

13.1 The licensee shall implement and maintain a waste management program.

13.2 The licensee shall maintain a cost estimate for decommissioning.

**14 SECURITY**

14.1 The licensee shall implement and maintain a security program.

**15 SAFEGUARDS AND NON-PROLIFERATION**

15.1 The licensee shall implement and maintain a safeguards program.

**16 PACKAGING AND TRANSPORT**

16.1 The licensee shall implement and maintain a packaging and transport program.

SIGNED at OTTAWA, \_\_\_\_\_.

\_\_\_\_\_  
Michael Binder, President  
on behalf of the Canadian Nuclear Safety Commission



## **CURRENT LICENCE**

e-Doc 4782981 (Word)

e-Doc 4898022 (PDF)

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## NUCLEAR RESEARCH AND TEST ESTABLISHMENT DECOMMISSIONING LICENCE

### WHITESHELL LABORATORIES

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  - d) possess, use and transfer prescribed information that is required for, associated with, or arises from the activities described in a),
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- (i) Nothing in this licence shall be construed to authorize non-compliance with any other applicable legal obligation or restriction.
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- (iii) the safety and control measures described in the licence application and the documents needed to support that licence application.

unless otherwise approved in writing by the Canadian Nuclear Safety Commission (hereinafter "the Commission").

1.2 The licensee shall, in the event of any conflict or inconsistency between licence conditions, codes or standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission, or a person authorized by the Commission, for resolution.

1.3 The licensee shall give written notification of changes to the facility or its operation, including deviation from design, operating conditions, policies, programs and methods referred to in the licensing basis.

1.4 The licensee shall ensure that every contractor working at the facility complies with this licence.

1.5 The licensee shall maintain a financial guarantee for decommissioning that is acceptable to the Commission.



- 1.6 The licensee shall comply with all commitments defined in the NRTEDL-W5-8.04/2018 LCH.
- 1.7 The licensee shall implement and maintain a public information and disclosure program.
- 1.8 The licensee shall implement and report on the progress of the Environmental Assessment Follow-Up Program.

## **2 DECOMMISSIONING**

- 2.1 The licensee shall conduct decommissioning activities in accordance with Volumes 1 to 12 of the Whiteshell Laboratories Detailed Decommissioning Plan.
- 2.2 The licensee shall implement and maintain decommissioning policies, programs and procedures.
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- 2.4 The licensee shall submit the project design requirements for construction of the approved second SMAG storage building prior to the commencement of construction activities described in paragraph e) of Part IV of this licence.
- 2.5 The licensee shall not carry out the activities referred to in paragraph a) of Part IV of this licence that relate to the completed construction activities in paragraph e) of Part IV of this licence for the approved second SMAG storage building until the submission of a commissioning report that is acceptable to the Commission.

## **3 SAFETY AND CONTROL AREA LICENCE CONDITIONS**

### **MANAGEMENT SYSTEM**

- 3.1 The licensee shall implement and maintain a management system.

### **HUMAN PERFORMANCE MANAGEMENT**

- 4.1 The licensee shall implement and maintain a human performance program.
- 4.2 The licensee shall implement and maintain a training program.

### **OPERATING PERFORMANCE**

- 5.1 The licensee shall implement and maintain a program for reporting to the Commission or a person authorized by the Commission.

### **SAFETY ANALYSIS**

- 6.1 The licensee shall implement and maintain a safety analysis program.
- 6.2 The licensee shall implement and maintain a nuclear criticality safety program.

### **PHYSICAL DESIGN**

- 7.1 The licensee shall implement and maintain a design program.
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### **FITNESS FOR SERVICE**

- 8.1 The licensee shall implement and maintain a fitness for service program.

### **RADIATION PROTECTION**

- 9.1 The licensee shall implement and maintain a radiation protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days.

### **CONVENTIONAL HEALTH AND SAFETY**

- 10.1 The licensee shall implement and maintain a conventional health and safety program.

### **ENVIRONMENTAL PROTECTION**

- 11.1 The licensee shall implement and maintain an environmental protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within seven days.

### **EMERGENCY MANAGEMENT AND FIRE PROTECTION**

- 12.1 The licensee shall implement and maintain an emergency preparedness program.
- 12.2 The licensee shall implement and maintain a fire protection program.

### **WASTE MANAGEMENT**

- 13.1 The licensee shall implement and maintain a waste management program.
- 13.2 The licensee shall maintain a cost estimate for decommissioning.

### **SECURITY**

- 14.1 The licensee shall implement and maintain a security program.

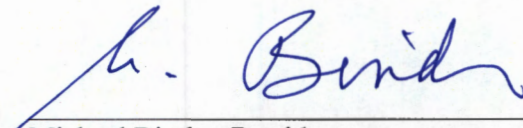
**SAFEGUARDS AND NON-PROLIFERATION**

15.1 The licensee shall implement and maintain a safeguards program.

**PACKAGING AND TRANSPORT**

16.1 The licensee shall implement and maintain a packaging and transport program.

SIGNED at OTTAWA, this 26 day of January, 2016.

A handwritten signature in blue ink, appearing to read "M. Binder", is written over a horizontal line.

Michael Binder, President  
on behalf of the Canadian Nuclear Safety Commission