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CMD: [20-H105]

Date signed/Signé le : 8 SEPTEMBER 2020

Issue Required Approval(s) for

Délivrer l'approbation requise pour

**SRB Technologies
(Canada) Inc. Financial
Guarantee**

**Garantie financière pour
SRB Technologies
(Canada) Inc.**

Hearing in writing based solely on
written submissions

Audience fondée uniquement sur des
mémoires

Scheduled for:
October 2020

Prévue pour :
Octobre 2020

Submitted by:
CNSC Staff

Soumise par :
Le personnel de la CCSN

e-Doc 6258316 (WORD)
e-Doc 6307345 (PDF)

Summary

This CMD pertains to a request for a decision regarding:

- Revision to the financial guarantee for SRB Technologies (Canada) Inc. (SRBT).

The following action is requested of the Commission:

- Accept CNSC staff's recommendation for the proposed revision to SRBT's financial guarantee.

The following items are attached:

- Current licence NSPFOL-13.00/2022

Résumé

Le présent CMD porte sur une demande de décision concernant :

- Une révision à la garantie financière de SRB Technologies (Canada) Inc. (SRBT).

La Commission pourrait considérer prendre les mesures suivantes :

- Accepter la recommandation du personnel de la CCSN au sujet de la révision proposée à la garantie financière de SRBT.

Les pièces suivantes sont jointes :

- Le permis actuel, NSPFOL-13.00/2022

Signed/signé le
8 September 2020

Kavita Murthy

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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EXECUTIVE SUMMARY

In accordance with subsection 24(5) of the *Nuclear Safety and Control Act* (NSCA), a licence may contain a condition that the applicant provide a financial guarantee in a form that is acceptable to the Commission. Accordingly, licence condition 1.3 of the current licence (NSPFOL-13.00/2022) held by SRB Technologies (SRBT) requires the licensee to maintain a financial guarantee acceptable to the Commission. The financial guarantee must be reviewed and updated every five years, or when there are material changes to the licensee's operational activities.

SRBT currently maintains a financial guarantee of \$652,488.00 for the safe decommissioning of existing operations. To fulfill the five-year update requirement, SRBT conducted a review and submitted a revised preliminary decommissioning plan (PDP) and cost estimate to the CNSC in November 2019. SRBT's PDP includes a revised cost estimate for decommissioning of \$727,327.00, an increase of \$74,839.00 from the current financial guarantee of \$652,488.00. The increase in the cost estimate takes into consideration the expansion of Zone 1 of SRBT's operations to house new equipment, as well as the removal and replacement of legacy equipment in Zone 3.

CNSC staff reviewed the revised PDP and confirmed there are no major changes to the decommissioning strategy for the SRBT facility that was previously accepted by CNSC staff and presented to the Commission during the licence renewal in 2015. The end-state objective is for the facility to be decommissioned to a condition that will permit its release from any further regulatory control by the CNSC. SRBT currently maintains an escrow agreement and a financial security and access agreement that provides the CNSC with direct access to the funds. The Commission accepted this financial instrument during the 2015 licence renewal for SRBT. SRBT has proposed to use the same financial instrument with the same terms and conditions.

CNSC staff reviewed the revised PDP, the cost estimate for decommissioning and the proposed financial guarantee. CNSC staff conclude that SRBT's submission meets the regulatory criteria of Regulatory Guide G-206, Financial Guarantees for the Decommissioning of Licensed Activities, and provides an adequate cost estimate for the future decommissioning of the SRBT facility.

CNSC staff recommend that the Commission accept the revised financial guarantee proposed by SRBT.

Referenced documents in this CMD are available to the public upon request.

1 OVERVIEW

1.1 Background

SRB Technologies (Canada) Inc. (SRBT) operates a nuclear facility that manufactures gaseous tritium light source (GTLS), under a Class IB operating licence, NSPFOL-13.00/2022 [1]. The facility is located on the outskirts of Pembroke, Ontario, approximately 150 km northwest of Ottawa, as shown in Figure 1-1. The SRBT facility has been in operation since 1990.

Figure 1-1: Aerial view of the SRBT facility



The SRBT facility processes tritium gas (HT) to produce sealed glass capsules that are coated with phosphorescent powder and filled with HT, to generate continuous light. Examples of such GTLS include signs, markers and tactical devices. The SRBT facility distributes products domestically and internationally.

In 2015, the Commission renewed the SRBT facility's operating licence for a seven-year period [2], expiring in June 2022. There have been no amendments to SRBT's operating licence.

Licence condition 12.2 of SRBT's licence requires SRBT to maintain a decommissioning strategy. To meet this licence condition, SRBT maintains a preliminary decommissioning plan (PDP) that includes the expected costs associated with decommissioning the SRBT facility. Licence condition 1.3 requires SRBT to maintain a financial guarantee for decommissioning that is

acceptable to the Commission, to ensure that the financial guarantee remains valid and in effect, and adequate to fund the preliminary decommissioning plan.

SRBT is required to conduct a review of the PDP every five years or when requested by the Commission to ensure the PDP remains adequate. In accordance with this requirement, SRBT conducted a PDP review and submitted a revised PDP and cost estimate to the CNSC in November 2019 [3].

1.2 Highlights

- SRBT's preferred decommissioning strategy is the "Prompt decommissioning strategy" as outlined in CSA standard N294 *Decommissioning of facilities containing nuclear substances*. This strategy is unchanged from what SRBT proposed and was accepted by CNSC staff during the 2015 licence renewal.
- The proposed Financial Guarantee to cover decommissioning costs is \$727,327.00, which is an increase of \$74,839.00 from the existing financial guarantee amount of \$652,488.00. The current financial guarantee was accepted by the Commission during the 2015 SRBT licence renewal.
- The increase in the cost estimate takes into consideration the expansion of Zone 1 to house new equipment, as well as the removal and replacement of legacy equipment in Zone 3.
- Acceptance of the proposed Financial Guarantee by the Commission does not require an amendment to the terms and conditions set out in SRBT's operating licence (NSPFOL-13.00/2022).

1.3 Overall Conclusions

CNSC staff have concluded that:

- SRBT's revised preliminary decommissioning plan provides an acceptable strategy and credible cost estimate, and is consistent with CNSC Regulatory Guide G-219 and CSA standard N294-09.
- SRBT's proposed financial guarantee is acceptable and adequate for future decommissioning of its facility, and is consistent with CNSC Regulatory Guide G-206.

1.4 Overall Recommendations

CNSC staff recommend the following:

That the Commission accept the proposed financial guarantee for SRBT in the amount of \$727,327.00.

2 MATTERS FOR CONSIDERATION

2.1 Background Information

In accordance with subsection 24(5) of the *Nuclear Safety and Control Act* (NSCA) [4], a licence may contain a condition that the applicant provide a financial guarantee in a form that is acceptable to the Commission.

Accordingly, licence condition 1.3 of SRB Technologies (SRBT)'s current licence (NSPFOL-13.00/2022) requires the licensee to maintain a financial guarantee acceptable to the Commission [1]. The financial guarantee must be reviewed and updated every five years, or when there are material changes to the licensee's operational activities.

Regulatory Guide G-206, *Financial Guarantees for the Decommissioning of Licensed Activities* [6] provides guidance regarding the establishment and maintenance of measures to fund the decommissioning of activities licensed by the CNSC.

SRBT currently maintains a financial guarantee of \$652,488.00 to cover the decommissioning costs for its facility. This financial instrument and amount was accepted by the Commission during the 2015 SRBT licence renewal [2].

SRBT's revised PDP estimated the decommissioning cost of its facility at \$727,327.00. Since this amount is higher than the amount previously accepted by the Commission, a revised financial guarantee is required. SRBT has proposed to use the same financial instrument with the same terms and conditions, and increase the amount to \$727,327.00 to reflect the increased decommissioning costs. Acceptance of the proposed financial guarantee by the Commission does not require an amendment to the terms and conditions set out in SRBT's operating licence (NSPFOL-13.00/2022).

2.2 Preliminary Decommissioning Plan

In November 2019, SRBT submitted to the CNSC a revised PDP for its facility [3]. This submission of the PDP is pursuant to licence condition 12.2 of the SRBT licence NSPFOL-13.00/2022 [1] outlining that SRBT shall maintain a decommissioning strategy. SRBT is required to review the PDP every five years or when requested by the Commission.

The preferred decommissioning strategy for SRBT has remained unchanged. SRBT's preferred decommissioning strategy is the "Prompt decommissioning strategy" as outlined in CSA N294 *Decommissioning of facilities containing nuclear substances* [6]. The facility will be decontaminated and decommissioned without any planned delays. The end state objective for the facility is to be decommissioned to a condition that will permit the release of the facility from any further regulatory control by the CNSC. As SRBT currently leases the property

where the nuclear facility is located, possession of the leased premises will be returned to the owner for future commercial or industrial use, or for redevelopment. This would only occur after the facility has been decommissioned and the CNSC has issued a Licence to Abandon the facility.

The revised PDP includes a breakdown of decommissioning costs associated with the proposed decommissioning strategy for the SRBT facility. The total costs of decommissioning the SRBT facility are estimated to be \$727,327.00 [3]. This value represents an increase of \$74,839.00 from the existing financial guarantee of \$652,488.00. The increase in the cost estimate is attributed to the following changes since the PDP was last submitted in 2014:

- Zone 1 of the facility was expanded to house an injection molder and industrial 3D printer, allowing SRBT to begin producing sign parts in-house. The new equipment is located in Zone 1 and do not interface with any nuclear substances. This equipment is not used in the tritium operations, however it is part of the PDP as equipment that would need to be dismantled and removed from the facility at the time of decommissioning.
- The following equipment was decontaminated, dismantled, removed and disposed of from the Zone 3 area of the facility:
 - 'LMI' laser cutting workstation
 - Reclaim rig
 - Rig room fume hoods
- The rig room fume hoods were replaced with similar fume hoods constructed of stainless steel.
- Labour rates were adjusted to account for inflation.

CNSC staff assessed and concluded that the submitted PDP meets the criteria and guidance set in CNSC Regulatory Guide G-219, *Decommissioning Planning for Licensed Activities* [7] and CSA standard N294-09 [6]. The revised PDP provides a credible cost estimate for the future decommissioning of the SRBT facility.

2.3 Financial Guarantee Proposal

Licence condition 1.3 of the SRBT licence NSPFOL-13.00/2022 dictates that SRBT shall maintain a financial guarantee for decommissioning that is acceptable to the Commission [1]. SRBT currently maintains a financial guarantee, in the form of an Escrow Agreement and a Financial Security and Access Agreement that was accepted by the Commission during SRBT's licence renewal in 2015 [2].

Financial guarantees are updated based on changes outlined in the decommissioning plan and cost estimates. Therefore, a revision is required to the financial guarantee to ensure funds are adequate to cover the increased cost of decommissioning.

SRBT proposes to continue to use a revised Escrow Agreement and a revised Financial Security and Access Agreement providing CNSC access to the funds. The maturity date of the current investment vehicle in escrow stands at April 24, 2020. The projected fund amount at that time is \$706,616.77.

On April 24, 2020, SRBT provided the CNSC with an update to the financial guarantee instrument [8]. SRBT proactively deposited \$20,710.23 in the investment account to fund the difference between the financial guarantee (\$706,616.77) and the cost estimate of the PDP (\$727,327.00). The value of the SRBT financial guarantee is currently \$727,327.00, which fully covers the future decommissioning of the SRBT facility as estimated in the updated PDP.

CNSC staff reviewed SRBT's proposal to continue using an Escrow Agreement and a Financial Security and Access Agreement as a financial instrument and conclude that it meets the criteria for financial instruments in CNSC Regulatory Guide G-206, *Financial Guarantees for the Decommissioning of Licenced Activities* [5].

3 OTHER MATTERS OF REGULATORY INTEREST

3.1 Environmental Assessment

CNSC staff have reviewed the application under the NSCA and concluded that there are no impacts to the environment because of this request.

3.2 Indigenous Consultation

The common law duty to consult with Indigenous groups applies when the Crown contemplates actions that may adversely affect potential or established Indigenous and/or treaty rights. Based on the information provided in the application, CNSC staff have determined that the request is not likely to cause adverse impacts to Indigenous and/or treaty rights. Therefore, the duty to consult does not arise in relation to the request.

4 OVERALL CONCLUSIONS AND RECOMMENDATIONS

4.1 Overall Conclusions

CNSC staff have concluded that:

- The revised preliminary decommissioning plan provides a credible cost estimate for the future decommissioning of the SRBT facility.
- The proposed financial guarantee is adequate for the future decommissioning of the SRBT facility.

4.2 Overall Recommendations

CNSC staff recommend the following:

- That the Commission accept the proposed financial guarantee for SRBT in the amount of \$727,327.00.

REFERENCES

1. SRB Technologies (Canada) Incorporated Nuclear Substance Processing Facility Operating Licence, NSPFOL-13.00/2022, June 2015 (e-Doc 4624670).
2. Record of Proceedings, Including Reasons for Decision, “*Application to Renew the Class IB Nuclear Substance Processing Facility Operating Licence for the Gaseous Tritium Light Source Facility in Pembroke, Ontario*, June 2015 (e-Doc 4790778).
3. Submission, *SRBT Submission of Revised Preliminary Decommissioning Plan - 2019*, November 2019
(<http://srbt.com/SRBT%20Preliminary%20Decommissioning%20Plan%20-%20November%202019.pdf>).
4. *Nuclear Safety and Control Act*, March 1997, available at <http://laws-lois.justice.gc.ca/eng/acts/N-28.3/FullText.html>.
5. Regulatory Guide G-206, *Financial Guarantees for the Decommissioning of Licensed Activities*, June 2000, available at http://nuclearsafety.gc.ca/pubs_catalogue/uploads/G206_e.pdf.
6. CSA Group, N294-09, *Decommissioning of Facilities Containing Nuclear Substances*, 2009.
7. Regulatory Guide G-219, *Decommissioning Planning for Licensed Activities*, June 2000, available at http://nuclearsafety.gc.ca/pubs_catalogue/uploads/G219_e.pdf.
8. Letter, S. Levesque (SRBT) to L. Posada (CNSC), *SRBT Financial Guarantee Update*, April 24, 2020 (e-Doc 6285251).

GLOSSARY

CMD	Commission Member Document
CNSC	Canadian Nuclear Safety Commission
GTLS	Gaseous Tritium Light Source
HT	Tritium Gas
NSCA	Nuclear Safety and Control Act
PDP	Preliminary Decommissioning Plan
SRBT	SRB Technologies (Canada) Inc.

A. BASIS FOR THE RECOMMENDATIONS

A.1 Regulatory Basis

The regulatory basis for the recommendations presented in this CMD is as follows:

Nuclear Safety and Control Act

Subsection 24(5) of the *Nuclear Safety and Control Act* provides that a licence may contain any term or condition that the Commission considers necessary for the purposes of the Act, including a condition that the applicant provide a financial guarantee in a form that is acceptable the Commission.

Subsection 24(6) of the *Nuclear Safety and Control Act* provides that the Commission may authorize the application of the proceeds of any financial guarantee referred to in subsection (5) in such manner as it considers appropriate for the purposes of this Act.

Subsection 24(7) of the *Nuclear Safety and Control Act* provides for the means by which a refund may be granted for any funds that have not been spent.

General Nuclear Safety and Control Regulations

The *General Nuclear Safety and Control Regulations* requires under paragraph 3(1)(l) that a licence application contains a description of any proposed financial guarantee relating to the activity to be licensed.

Class I Nuclear Facilities Regulations

Paragraph 3(k) of the *Class I Nuclear Facilities Regulations* required that an application for a licence in respect of a Class I nuclear facility, other than a licence to abandon, shall contain the proposed plan for the decommissioning of the nuclear facility or of the site.

Licence Condition 12.2 of the SRB Technologies (Canada) Inc. licence NSPFOL-13.00/2022

The licensee shall maintain a preliminary decommissioning strategy.

Licence condition 1.3 of the SRB Technologies (Canada) Inc. licence NSPFOL-13.00/2022

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

A.2 Technical Basis

The technical basis for the recommendation presented in this CMD is compared against the following:

- CNSC Regulatory Guide G-206, *Financial Guarantees for the Decommissioning of Licensed Activities*
- CNSC Regulatory Guide G-219, *Decommissioning Planning for Licensed Activities*
- CSA Standard N294-09, *Decommissioning of Facilities Containing Nuclear Substances*

CURRENT LICENCE

e-Doc 4522207 (WORD)

e-Doc 4624670 (PDF)



**CLASS 1B NUCLEAR SUBSTANCE PROCESSING FACILITY
OPERATING LICENCE**

SRB TECHNOLOGIES (CANADA) INCORPORATED

I) LICENCE NUMBER: NSPFOL-13.00/2022

II) LICENSEE: Pursuant to section 24 of the *Nuclear Safety and Control Act*, this licence is issued to:

**SRB Technologies (Canada) Incorporated
320-140 Boundary Road
Pembroke, Ontario
K8A 6W5**

III) LICENCE PERIOD: This licence is valid from **July 1, 2015**, to **June 30, 2022**, unless otherwise suspended, amended, revoked or replaced.

IV) LICENSED ACTIVITIES:

This licence authorizes the licensee to:

- (a) operate a Class 1B Facility, comprising of a tritium processing facility , at the location referred to in Section II of this licence (hereinafter “the facility”) for the purposes of manufacturing radiation devices;
- (b) produce, possess, transfer, service and use, radiation devices arising from the activities described in (a);

- (c) possess, transfer, use, process, manage, store and dispose of nuclear substances are required for, associated with, or arise from the activities described in (a);
- (d) the possession of tritium up to a limit of 6000 terabecquerels of tritium in any form;
- (e) possess, and use prescribed information that is required for, associated with, or arise from the activities described in (a).

V) EXPLANATORY NOTES:

- (a) 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.
- (b) The “SRB TECHNOLOGIES (CANADA) INC. LICENCE CONDITION HANDBOOK (LCH)” provides:
 - (i) compliance verification criteria in order to meet the conditions listed in the licence;
 - (ii) information regarding delegation of authority to CNSC staff; and
 - (iii) applicable versions of documents and a process for version control of codes, standards or other documents that are used as compliance verification criteria in order to meet the conditions listed in the licence.

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 CNSC (hereinafter “the Commission”).

- 1.2 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.
- 1.3 The licensee shall maintain a financial guarantee for decommissioning that is acceptable to the Commission.
- 1.4 The licensee shall implement and maintain a public information and disclosure program

2. MANAGEMENT SYSTEM

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

3. HUMAN PERFORMANCE MANAGEMENT

- 3.1 The licensee shall implement and maintain a training program.

4. OPERATING PERFORMANCE

- 4.1 The licensee shall implement and maintain an operating program, which includes a set of operating limits.
- 4.2 The licensee shall implement and maintain a program for reporting to the Commission or a person authorized by the Commission.

5. SAFETY ANALYSIS

- 5.1 The licensee shall implement and maintain a safety analysis program.

6. PHYSICAL DESIGN

- 6.1 The licensee shall implement and maintain a design program.

7. FITNESS FOR SERVICE

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

8. RADIATION PROTECTION

- 8.1 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.

9. CONVENTIONAL HEALTH AND SAFETY

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

10. ENVIRONMENTAL PROTECTION

- 10.1 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.

11. EMERGENCY MANAGEMENT AND FIRE PROTECTION

- 11.1 The licensee shall implement and maintain an emergency preparedness program.
11.2 The licensee shall implement and maintain a fire protection program.

12. WASTE MANAGEMENT

- 12.1 The licensee shall implement and maintain a waste management program.
12.2 The licensee shall implement and maintain a decommissioning strategy.


13. SECURITY

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

14. PACKAGING AND TRANSPORT

- 14.1 The licensee shall implement and maintain a packaging and transport program.

SIGNED at OTTAWA, this 29th day of June, 2015



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