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NUCLEAR SUBSTANCE PROCESSING FACILITY OPERATING LICENCE

SRB TECHNOLOGIES (CANADA) INCORPORATED

- I) **LICENCE NUMBER:** **NSPFOL-13.00/2015**
- 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, 2010 to June 30, 2015, unless suspended, amended, revoked or replaced.
- IV) **LICENSED ACTIVITIES:**
- This licence authorizes the licensee to:
- a) operate a tritium processing facility (hereinafter “the facility”) at the location named in Part II of this licence;
 - b) possess, transfer, use, process, manage, and store the nuclear substances that are required for, associated with, or arise from the activities described in a); and
 - c) possess a maximum of 6000 terabecquerel of tritium in any form.
- 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 content of Appendix A, “RELEASE LIMITS”, attached to this licence forms part of the licence.
- c) The “SRBT LICENCE CONDITIONS HANDBOOK (LCH)” provides 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 described in the LCH:
 - a) Changes to the safety and control measures described in the application and the documents needed to support that application are permitted provided that the objective of the licensing basis is met.
 - b) Changes that are outside of the boundary conditions set by the licensing basis are not permitted without the prior written approval of the Canadian Nuclear Safety Commission (hereinafter “the Commission”).
- 1.2 The licensee shall give written notification to the Commission of any changes made to the documents needed to support the licence application.
- 1.3 The licensee shall, in the event of any conflict or inconsistency between licence conditions or codes, standards or regulatory documents referenced in this licence, direct the conflict or inconsistency to the Commission or a person authorized by the Commission, for regulatory interpretation.

2. MANAGEMENT SYSTEM

- 2.1 The licensee shall implement and maintain a management system for the facility.
- 2.2 The licensee shall give written notification of any changes to the programs or documents referenced in the management system prepared to meet condition 2.1.
- 2.3 The licensee shall maintain and implement a process for reporting to the Commission that includes reporting of all events required by the *Nuclear Safety and Control Act* and its Regulations, and routine reports on the results of monitoring programs. The process shall define the frequency of the routine reports.
- 2.4 The licensee shall prepare an annual compliance and performance report.

2.5 The licensee shall implement and maintain a program for public information for the facility, including a public disclosure protocol.

3. HUMAN PERFORMANCE MANAGEMENT

3.1 The licensee shall implement and maintain a program for training staff for the facility.

4. OPERATING PERFORMANCE

4.1 The licensee shall implement and maintain a program for operation of the facility.

4.2 The operating program shall provide direction for safely operating the facility and shall reflect the safety analysis referred to in condition 5.1.

4.3 The licensee shall ensure that its workers handle radioactive nuclear substance in accordance with written work procedures. These procedures shall be provided to all workers and shall be available wherever radioactive nuclear substances are handled or stored.

4.4 Unsealed source material shall be stored on uranium beds or in the handling volumes of the gas fill rigs.

4.5 The licensee shall establish and maintain, in addition to any record required to be maintained pursuant to the *Nuclear Safety and Control Act* and its Regulations, full and accurate records to show:

- a) the acquisition of nuclear substances including the quantity received, the form of the substance, and the name of the vendor;
- b) the inventory of all radioactive nuclear substances at the facility; and
- c) the disposition of all nuclear substances acquired for use or processed by the facility, including the name and address of the recipient, a copy of the recipient's licence (if applicable), the quantity of radioactive nuclear substance, and the date of shipment.

5. SAFETY ANALYSIS

5.1 The licensee shall have safety analysis documentation that describes the safety analysis for the facility.

6. PHYSICAL DESIGN

- 6.1 The licensee shall not make any change to the design of, or equipment at the nuclear facility, that would introduce hazards different in nature or greater in probability than those considered by the safety analysis, without the prior written approval of the Commission or a person authorized by the Commission.

7. FITNESS FOR SERVICE

- 7.1 The licensee shall implement and maintain a program for maintenance for the facility.
- 7.2 The licensee shall implement and maintain a program for periodic inspection and testing for the facility.

8. RADIATION PROTECTION

- 8.1 The licensee shall implement and maintain a program for radiation protection for the facility.
- 8.2 The licensee shall notify the Commission within 24 hours of becoming aware that an action level has been exceeded and shall file a written report within 21 working days of becoming aware of the matter.

9. CONVENTIONAL HEALTH AND SAFETY

- 9.1 The licensee shall implement and maintain a program for occupational health and safety for the facility.

10. ENVIRONMENTAL PROTECTION

- 10.1 The licensee shall implement and maintain an environmental protection program for the facility.
- 10.2 The licensee shall control, monitor and record releases of tritium to the environment from the nuclear facility such that the releases do not exceed the release limits specified in Appendix A.
- 10.3 The licensee shall control and monitor the releases of hazardous substances.
- 10.4 The licensee shall notify the Commission within 24 hours of becoming aware that an action level for environmental releases has been exceeded and shall file a written report within 21 working days of becoming aware of the matter.

11. EMERGENCY MANAGEMENT AND FIRE PROTECTION

11.1 The licensee shall implement and maintain a program for emergency preparedness to address on-site and off-site events which can affect the facility.

11.2 The licensee shall implement and maintain a program for fire protection for the facility.

12. WASTE MANAGEMENT

12.1 The licensee shall implement and maintain a program for waste management for the facility.

12.2 The licensee shall maintain a preliminary decommissioning plan for decommissioning the facility. This shall be reviewed every five years or when requested by the Commission or person authorized by the Commission

13. SECURITY

13.1 The licensee shall implement and maintain a program for nuclear security at the facility.

14. SAFEGUARDS

14.1 The licensee shall take all necessary measures to facilitate Canada's compliance with any applicable safeguards agreement.

14.2 The licensee shall provide the International Atomic Energy Agency, an International Atomic Energy Agency inspector or a person acting on behalf of the International Atomic Energy Agency with such reasonable services and assistance as are required to enable the International Atomic Energy Agency to carry out its duties and functions pursuant to a safeguards agreement.

15. PACKAGING AND TRANSPORT

15.1 The licensee shall implement and maintain a program for packaging and transport for the facility.

16. NUCLEAR FACILITY SPECIFIC

- 16.1 The licensee shall comply with the payment schedule for arrears on the CNSC Cost Recovery Fees that has been accepted by the Commission.
- 16.2 The licensee shall maintain a financial guarantee for decommissioning that is acceptable to the Commission and payments to any decommissioning escrow account shall be according to the schedule accepted by the Commission.
- 16.3 The licensee shall submit to the Commission an annual Review Engagement Report reporting the gross revenue and profits of the company.

SIGNED at OTTAWA this 30 day of June, 2010.



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

APPENDIX A

RELEASE LIMITS

To Atmosphere

Nuclear Substances and Form	Limits (Bq/year)
Tritium as Tritium Oxide	6.72E + 13
Total Tritium as Tritium Oxide and Tritium Gas	4.48E+ 14

To Sewer

Nuclear Substance and Form	Limits (GBq/year)
Tritium-Water Soluble	200