



**CLASS IB NUCLEAR SUBSTANCE
PROCESSING FACILITY LICENCE**

BEST THERATRONICS LTD.

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* (NSCA) and regulations made under the NSCA.

I) LICENCE NUMBER: NSPFL-14.00/2029

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

**Best Theratronics Limited
413 March Road
Ottawa, Ontario
K2K 0E4**

III) LICENCE PERIOD: This licence is valid from **July 1, 2019**, to **June 30, 2029**, unless otherwise suspended, amended, revoked, or replaced.

IV) LICENSED ACTIVITIES:

This licence authorizes the licensee to:

- (a) operate a Class IB nuclear facility located at 413 March Road, Ottawa, Ontario, including activities related to:
 - (i) operating a particle accelerator/accelerators (cyclotron/cyclotrons);
 - (ii) possessing nuclear substances for the purposes of manufacturing radiation devices and radioactive source teletherapy machines;
 - (iii) possessing a radioactive source teletherapy machine, for the purposes of developing and testing of radioactive

- (b) possess, transfer, manage, and store nuclear substances arising from the activities regarding the particle accelerators;
- (c) produce prescribed equipment;
- (d) possess, transfer, use, import, export, manage, and store within the facility any nuclear substances that are required for, associated with, or related to manufacturing radiation devices, and development and testing of radioactive source teletherapy machines;
- (e) possess, transfer, use, import, export, and store prescribed equipment that is required for, associated with, or related to manufacturing of radiation devices and development and testing of radioactive source teletherapy machines, and manufacturing radioactive source teletherapy machines; and
- (f) possess and use prescribed information that is required for, associated with, or arise from operating the Class IB nuclear facility.

V) EXPLANATORY NOTES:

- (a) The “Best Theratronics Ltd. Licence Conditions 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:

GENERAL

G.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 this licence and the documents directly referenced in this 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”).

G.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.

G.3 The licensee shall maintain a financial guarantee for decommissioning acceptable to the Commission.

G.4 The licensee shall implement and maintain a public information and disclosure program.

1. MANAGEMENT SYSTEM

1.1 The licensee shall implement and maintain a management system.

2. HUMAN PERFORMANCE MANAGEMENT

2.1 The licensee shall implement and maintain a training program.

3. OPERATING PERFORMANCE

3.1 The licensee shall implement and maintain an operating program, which includes a set of operating limits.

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

3.3 The licensee shall implement and maintain a program for inventory control of all nuclear substances and prescribed equipment including radiation devices.

4. SAFETY ANALYSIS

4.1 The licensee shall implement and maintain a safety analysis program.

5. PHYSICAL DESIGN

5.1 The licensee shall implement and maintain a design program.

6. FITNESS FOR SERVICE

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

7. RADIATION PROTECTION

7.1 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 7 days.

8. CONVENTIONAL HEALTH AND SAFETY

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

9. ENVIRONMENTAL PROTECTION

9.1 The licensee shall implement and maintain an environmental protection program.

10. EMERGENCY MANAGEMENT AND FIRE PROTECTION

10.1 The licensee shall implement and maintain an emergency preparedness program.

10.2 The licensee shall implement and maintain a fire protection program.

11. WASTE MANAGEMENT

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

11.2 The licensee shall implement and maintain a decommissioning plan.

12. SECURITY

12.1 The licensee shall implement and maintain a security program.

13. SAFEGUARDS AND NON-PROLIFERATION

13.1 The licensee shall implement and maintain a safeguards program.

14. PACKAGING AND TRANSPORT

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

15. SITE SPECIFIC

15.1 Class IB Facility: Particle Accelerator (cyclotron)

The licensee shall not operate a particle accelerator/particle accelerators (cyclotron/cyclotrons) with a capability of producing nuclear energy above 50 MeV at beam energy greater than 1 MeV without prior authorization from the Commission.

15.2 Export Restrictions

This licence does not authorize the licensee to export, for the valid period of this licence in respect of a nuclear substance, a radioactive sealed source whose corresponding activity is equal to or greater than the value set out in column 2 of Table 1:

Table 1: Activity Limits for Exporting Sealed Sources

Column 1 Nuclear Substance	Column 2 (TBq)
Americium 241	0.6
Americium 241/Beryllium	0.6
Californium 252	0.2
Curium 244	0.5
Cobalt 60	0.3
Cesium 137	1
Gadolinium 153	10
Iridium 192	0.8
Promethium 147	400
Plutonium 238	0.6
Plutonium 239/Berilium	0.6
Radium 226	0.4
Selenium 75	2
Strontium 90 (Yttrium 90)	10
Thulium 170	200
Ytterbium 169	3

SIGNED at OTTAWA, this 25th day of June, 2019


Rumina Velshi, President
on behalf of the Canadian Nuclear Safety Commission