



## Radiotherapy Licence Application Form

### Section A – Applicant

#### A1 Type of request

- Construction     Renewal     Operating to commission     Decommissioning  
 Routine operation (amendment)    Current licence # \_\_\_\_\_

#### A2 Language of licence

- English     French     Both

#### A3 Applicant information

Applicant: \_\_\_\_\_

Corporate number (if applicable): \_\_\_\_\_

##### Canadian head office address:

Street: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

##### Mailing Address (if different from above):

Street: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

#### A4 Access to licensee information

Is any part of this application subject to a request for exemption from the CNSC policy on public access to licensing information?

- Yes     No

(Note: If Yes, attach details of request for exemption)

#### A5 Contact person for billing of cost recovery fees

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Telephone: \_\_\_\_\_ Facsimile: \_\_\_\_\_

Email: \_\_\_\_\_  Not applicable

### Section B – Licensed Use Type, Activities and Locations

#### B1 Licensed use types

Indicate only one prescribed equipment use type. A separate application is needed for each.

- Accelerator  
 Teletherapy  
 Brachytherapy remote afterloader – high dose rate (HDR)  
 Brachytherapy remote afterloader – low dose rate (LDR)  
 Brachytherapy remote afterloader – intravascular brachytherapy (IVB)\*

\* (applies to afterloaders using only pure  $\beta$ - emitters (e.g., Sr-90 or P-32))

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**B2 Licensed activities**

Check as many activities as you intend to conduct in association with the nuclear substances that are associated with or arise from the your selected prescribed equipment use type

Possess     Store     Transfer     Import     Export  
 Other: \_\_\_\_\_

**B3 Principal location of use and/or storage**

Building: \_\_\_\_\_ Room # \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

used at     stored at     both

**B4 Other locations of use and/or storage**

Building: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Room # \_\_\_\_\_  used at     stored at     both

Room # \_\_\_\_\_  used at     stored at     both

Room # \_\_\_\_\_  used at     stored at     both

Room # \_\_\_\_\_  used at     stored at     both

Room # \_\_\_\_\_  used at     stored at     both

More locations appended as: \_\_\_\_\_

**Section C – Nuclear Substances and Prescribed Equipment****C1 Class II prescribed equipment** If more space is required, please submit on a separate sheet.**A. Medical accelerators**

Manufacturer	Model name and number	CNSC certificate number	Serial number (if available)	Types of beam and output energies of the accelerator	Location (room number)

**B. Teletherapy or brachytherapy machines**

Manufacturer	Model name and number	CNSC certificate number	Device serial number	Name or symbol and mass number of nuclear substance	Maximum activity of nuclear substance in device	Source model number	Source serial number (if available)

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**C2 Sealed sources which are *not* incorporated into Class II prescribed equipment**

(e.g., replacement sources or check sources)

Manufacturer	Model name and number	Name or symbol and mass number of nuclear substance	Maximum activity of nuclear substance (per source)	Serial number

**Section D – Radiation Safety Program****D1 Radiation safety officer (RSO)**

(Please print)

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Telephone: \_\_\_\_\_ Facsimile: \_\_\_\_\_

Email: \_\_\_\_\_ RSO certificate number: \_\_\_\_\_

Description of RSO's qualifications and experience is appended as: \_\_\_\_\_

**D2 RSO Acknowledgement**

I accept the responsibilities described in the job description noted in Subsection D3 below.

Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Signature: \_\_\_\_\_  
                  YYYY                  MM                  DD**D3 Radiation safety officer – job description**

Append the applicant's RSO job description.

Appended as: \_\_\_\_\_

**D4 Designated supervising physician (DSP)**

(Please print)

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Telephone: \_\_\_\_\_ Facsimile: \_\_\_\_\_

Email: \_\_\_\_\_

Description of DSP's qualifications and experience is appended as: \_\_\_\_\_

**D5 DSP Acknowledgement**

I accept the designation of supervising physician.

Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Signature: \_\_\_\_\_  
                  YYYY                  MM                  DD**D6 Organizational management structure**

Append a description of the internal allocation of functions, responsibilities and authority of the radiation safety management structure.

Appended as: \_\_\_\_\_

**D7 Terms of reference for the radiation safety committee (if applicable)**

Append a copy of the terms of reference or the mandate for radiation safety of the "Radiation Safety Committee (RSC)" or equivalent "Health and Safety Subcommittees" in your organization.

Appended as: \_\_\_\_\_

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**D8 Radiation detection instruments**

Append a list of all radiation detection instruments with their operating characteristics and intended use.

Appended as: \_\_\_\_\_

**Section E – Radiation Safety Policies and Procedures****E1 As low as reasonably achievable (ALARA)**

Append a copy of your organization's policies and procedures to ensure that radiation exposure is ALARA.

Appended as: \_\_\_\_\_

**E2 Action levels**

Append a copy of your organization's policies and procedures regarding action levels.

Appended as: \_\_\_\_\_

**E3 Worker qualifications, experience, training and authorization**

Append a copy of your organization's policies and procedures which state that only trained workers may handle nuclear substances and attach a detailed description of the qualifications of workers and the proposed in-house training program.

Appended as: \_\_\_\_\_

**E4 Nuclear energy workers designation policy**

Append a copy of your organization's policies and procedures which designate workers as nuclear energy workers (NEWs) and which provide customized instructions to them.

Appended as: \_\_\_\_\_

**E5 Personal dose monitoring**

Append a copy of your organization's policies and procedures for external dose monitoring

Appended as: \_\_\_\_\_

**E6 Posting**

Append a copy of your organization's policies and procedures for restricting the use and storage of nuclear substances to authorized rooms only, including posting of these rooms.

Appended as: \_\_\_\_\_

**E7 Decommissioning**

Append a copy of the preliminary decommissioning plan for the Class II nuclear facility.

Appended as: \_\_\_\_\_

**E8 Access control and security**

Append a copy of your organization's policies and procedures which restrict any access to nuclear substances and prescribed equipment to authorised workers.

Appended as: \_\_\_\_\_

**E9 Inventory control and records**

Append a copy of your organization's policies and procedures for inventory control.

Appended as: \_\_\_\_\_

**E10 Receipt of packages**

Append a copy of your organization's policies and procedures for receiving shipments of nuclear substances.

Appended as: \_\_\_\_\_

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<b>E11</b>	<b>Waste disposal of nuclear substances</b>
Append a copy of your organization's policies and procedures for handling and disposing of waste containing nuclear substances.	
Appended as: _____	
<b>E12</b>	<b>Source changes for class II prescribed equipment</b>
Append a copy of your organization's policies and procedures for source changes.	
Appended as: _____	
<b>E13</b>	<b>Maintenance and use of portable radiation detection instruments</b>
Append a copy of your organization's policy for the maintenance and calibration of portable radiation detection meters.	
Appended as: _____	
<b>Section F- Licence Renewals (to be completed only when renewing an existing licence)</b>	
<b>F1</b>	<b>Radiation dose summary</b>
Append a report summarizing the past year's external (TLD) radiation dosimetry results for all of the licensee's monitored workers.	
Appended as: _____	
<b>F2</b>	<b>Sealed sources acquired</b>
List all sealed nuclear substances acquired during the last year, with serial numbers and assay details.	
Appended as: _____	
<b>F3</b>	<b>Disposal or transfer of sealed sources</b>
Append a summary of the annual quantity of radioactive waste which has been disposed of or transferred over the last year.	
Appended as: _____	
<b>F4</b>	<b>Incidents</b>
Append a brief description of any unplanned events or incidents which happened within the last year.	
Appended as: _____	
<b>F5</b>	<b>Occupancy review</b>
Append an update of the description, occupancy and classification of the areas adjacent to the facility.	
Appended as: _____	
<b>F6</b>	<b>Operating workload</b>
Append a summary of the operating workload for the facility for the past year.	
Appended as: _____	
<b>F7</b>	<b>Radiation survey</b>
Append a copy of the most recent radiation survey of the facility.	
Appended as: _____	

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## Section G – Facility Planning and Design Parameters

### G1 Site control

Append proof of ownership or authorization to build on the proposed site and a description of the facility restrictions and public notification program.

Appended as: \_\_\_\_\_

### G2 Nuclear facility plans and drawings

Append the plans and elevation drawings with the required information listed in Subsection G2 of the guide.

Appended as: \_\_\_\_\_

### G3 Description, occupancy and classification of adjacent areas

Append the classification and occupancy factors of the adjacent areas based on the planned use of each area. Include the areas above and below the treatment room.

Appended as: \_\_\_\_\_

### G4 Class II prescribed equipment design workload

Append an estimate of the projected workload for the facility. For accelerators, include both the dose delivered in the primary beam and the number of Monitor Units (MUs) delivered.

Appended as: \_\_\_\_\_

### G5 Dose rate and annual dose calculations for adjacent areas

Append detailed calculations which estimate the dose rates and annual doses expected in all areas adjacent to the facility. The calculations should take into account the facility workload, shielding design, and the usage and occupancy of surrounding areas.

Appended as: \_\_\_\_\_

### G6 Other design considerations

Append a description of the proposed shielding verification methods and, for accelerators, a description and analysis of the room ventilation.

Appended as: \_\_\_\_\_

## SECTION H – Safety System Requirements

### H1 Door/entrance interlocks

Append a detailed description of the door or entrance interlocks and their function, including wiring schematics.

Appended as: \_\_\_\_\_

### H2 Warning lights

Append a detailed description of the warning lights and indicate their locations on the plans of the treatment room submitted in G2.

Appended as: \_\_\_\_\_

### H3 Radiation warning system

If applicable, append a detailed description of the radiation warning system and its function. Indicate its location on the plans of the treatment room submitted in G2.

Appended as: \_\_\_\_\_

### H4 Emergency off buttons

Append a description of the design and function of the emergency stop buttons both inside and outside the treatment room. Indicate their locations on the plans of the treatment room submitted in G2.

Appended as: \_\_\_\_\_

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<b>H5</b>	<b>Beam stops</b>
<p>If applicable, append a description of the methods used to limit the primary beam orientation.</p> <p>Appended as: _____</p>	
<b>H6</b>	<b>Viewing system</b>
<p>Append a description of the viewing system used to monitor the patient during treatment.</p> <p>Appended as: _____</p>	
<b>H7</b>	<b>Warning signs</b>
<p>Append a description of the size and location of the radiation warning signs to be posted at the facility.</p> <p>Appended as: _____</p>	
<b>H8</b>	<b>Tools and equipment for stuck source emergencies</b>
<p>If applicable, append a description of the emergency tools and equipment which will be kept available whenever the Class II prescribed equipment is in use.</p> <p>Appended as: _____</p>	
<b>SECTION I – Class II Nuclear Facility Operating Licence for Commissioning</b>	
<b>I1</b>	<b>Confirmation of facility design</b>
<p>Provide confirmation that the shielding was constructed according to the plans submitted in your application for a licence to construct this facility and; if applicable, measurements demonstrating that the room ventilation rate meets design specifications.</p> <p>Appended as: _____</p>	
<b>I2</b>	<b>Commissioning plans</b>
<p>Append the required information related to planning your commissioning activities as listed in subsection I2 of the guide.</p> <p>Appended as: _____</p>	
<b>I3</b>	<b>Safety device tests</b>
<p>Append a detailed description of the proposed performance tests for the safety systems listed in section H.</p> <p>Appended as: _____</p>	
<b>I4</b>	<b>Radiation survey</b>
<p>Append your plan for performing the initial radiation survey of the facility.</p> <p>Appended as: _____</p>	
<b>SECTION J – Class II Nuclear Facility Routine Operation Licence</b>	
<b>J1</b>	<b>Results of safety system tests</b>
<p>Append the results of the functionality tests performed on your safety systems.</p> <p>Appended as: _____</p>	
<b>J2</b>	<b>Results of radiation survey</b>
<p>Append the results of your initial radiation survey performed during commissioning.</p> <p>Appended as: _____</p>	
<b>J3</b>	<b>Overview of facility operation</b>
<p>Append the procedures governing use of the facility as outlined in subsection J3 of the guide.</p> <p>Appended as: _____</p>	

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<b>J4</b>	<b>Basic operating instructions for Class II prescribed equipment</b>
<p>Append the basic operating procedures for the Class II Prescribed Equipment listed in subsection J4 of the guide.</p> <p>Appended as: _____</p>	
<b>J5</b>	<b>Quality assurance program</b>
<p>Append a description or a copy of those elements of the quality assurance program for your facility which cover the topics listed in subsection J5 of the guide.</p> <p>Appended as: _____</p>	
<b>J6</b>	<b>Special requirements for facilities which do not have a Class II prescribed equipment servicing licence</b>
<p>Append your policies and procedures for routine maintenance and interlock bypass.</p> <p>Appended as: _____</p>	
<b>J7</b>	<b>Special instructions for nursing staff at LDR brachytherapy facilities</b>
<p>Append the safety instructions that you will provide to nursing staff who are caring for patients with LDR brachytherapy implants; including the instructions for dealing with inadvertent interruption of treatments and response to medical emergencies:</p> <p>Appended as: _____</p>	
<b>J8</b>	<b>Records and reporting system</b>
<p>Append the policies and procedures that ensure that required records are kept and that reports will be provided as required.</p> <p>Appended as: _____</p>	
<b>SECTION K – Licence for Decommissioning (Accelerators Only)</b>	
<b>K1</b>	<b>Overview of decommissioning plan</b>
<p>Provide an overview of your proposed decommissioning process, including the facilities and equipment affected, the tentative schedule and the proposed state of the site upon completion.</p> <p>Appended as: _____</p>	
<b>K2</b>	<b>Personnel qualifications and training</b>
<p>Provide the names and qualifications of the persons responsible for overseeing decommissioning and the responsibilities, qualifications and proposed training requirements for persons participating in decommissioning. A Class II Prescribed Equipment Servicing licence is required to disassemble the accelerator.</p> <p>Appended as: _____</p>	
<b>K3</b>	<b>Estimation of the types, activities and radiation doses from nuclear substances</b>
<p>Append an estimate of the types and activities of any nuclear substances present at the facility the estimated radiation doses to staff resulting from decommissioning.</p> <p>Appended as: _____</p>	
<b>K4</b>	<b>Disposal of Class II prescribed equipment, nuclear substances and hazardous materials</b>
<p>Append your plan for the final disposition of the accelerator components, nuclear substances and any other hazardous materials associated with the facility.</p> <p>Appended as: _____</p>	

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