



# **Guide for Alberta's Radiation Protection Program**



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# Glossary

|                          |                                                                                                                                                                |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Agency manual (manual)   | Manual containing information specified in appendices A or B.                                                                                                  |
| Director                 | Person appointed as a Director under the <i>Occupational Health and Safety (OHS) Act</i> .                                                                     |
| Guide                    | Guide for Alberta's Radiation Protection Program (publication number RAD010), as amended from time to time and as published by Alberta Labour and Immigration. |
| Inspection agency        | A person designated under Section 58 of the OHS Act as an Authorized Radiation Protection Inspection Agency.                                                   |
| OHS                      | Occupational health and safety.                                                                                                                                |
| OHS Act                  | OHS Act, SA 2020 cO-2.2.                                                                                                                                       |
| Program                  | Alberta's Radiation Protection Program.                                                                                                                        |
| Radiation agencies       | Inspection agencies and registration agencies.                                                                                                                 |
| Radiation equipment      | Designated radiation equipment as specified in the OHS Code.                                                                                                   |
| Registration agency      | A person designated under Section 58 of the OHS Act as an Authorized Radiation Health Registration Agency.                                                     |
| Registration certificate | Radiation equipment registration certificate.                                                                                                                  |

# 1.0 Introduction and authority

This Guide outlines the parameters of Alberta's Radiation Protection Program (the Program), which is established under Section 59 of the OHS Act. This Guide may be updated from time to time by Alberta Labour and Immigration to ensure the Program remains current.

Part 20 of the OHS Code places an obligation on the employer to ensure that all designated radiation equipment has a valid registration certificate, issued by a registration agency, before the equipment may be used by end-users at a work site. This Guide explains how a registration certificate is issued, including the role of radiation agencies and Government of Alberta (Labour and Immigration) staff within the process. This Guide sets out the obligations of registration agencies and inspection agencies with respect to the Program.

Designated radiation equipment is defined in the OHS Code and includes X-ray equipment, some particle accelerators, and class 3B and class 4 lasers (see Section 1 of the OHS Code for the definition).

A Director may administer the Program, which includes, but is not limited to designating radiation agencies, making any necessary Program decisions, sharing Program information with radiation agencies, and sharing Program information with any relevant regulatory authority. A Director or OHS officers appointed under the OHS Act may carry out compliance and enforcement activities.

A Director also has all authorities vested in a radiation agency, and may vary, suspend or revoke a registration certificate, including those issued by a registration agency.

## 2.0 Scope of Program

### 2.1 General

This Program applies to the inspection and registration of designated radiation equipment as defined in the OHS Code and outlines the recruitment, roles and responsibilities, and other administrative aspects of radiation agencies. This Program applies to employers who are required under the OHS Code to obtain a registration certificate for their radiation equipment.

There are two types of radiation agencies. These are:

- Authorized Radiation Protection Inspection Agencies (inspection agency); and
- Authorized Radiation Health Registration Agencies (registration agency).

The role of an inspection agency is to inspect radiation equipment and the facilities where the equipment is installed, or to review codes of practice for use of the radiation equipment. The purpose of an inspection is to determine compliance with health and safety standards specified in the OHS Code in general, and Part 20 of the OHS Code specifically, as it applies to the radiation equipment.

The role of a registration agency is to issue registration certificates for radiation equipment. A registration agency may issue a registration certificate once the registration agency is satisfied that:

- the equipment and facility in which the equipment is installed, has passed an inspection by an inspection agency; or
- an inspection agency has approved a code of practice for use of the radiation equipment.

A registration agency has the discretion to monitor the industry sectors in which they provide services and communicate with employers who use radiation equipment to help facilitate compliance with the equipment registration requirements.

A radiation agency may report issues of non-compliance or potential non-compliance with radiation safety requirements, as outlined in this Guide to a Director.

### 2.2 Special consideration for self-governing professions

Registration agencies, including agencies that are also regulatory colleges, may issue registration certificates to members of self-governing professions recognized under Alberta law (for example, professions regulated under the *Health Professions Act*).

This Program does not prevent a regulatory college from setting radiation health and safety standards for its members that exceed the minimum standards outlined under OHS legislation and this Program.

If a regulatory college has set radiation health and safety standards for the professional practice of its members, a registration agency may consider such standards when deciding on whether to issue a registration certificate. The registration agency may also consider the standards of the profession to inform any terms and conditions placed on a registration certificate to ensure the profession's radiation health and safety requirements are met.

## 2.3 Alignment with federal legislation

Canada's federal legislation can place restrictions on what radiation equipment is allowed to be used, manufactured, sold or marketed in Canada. For example, restrictions are imposed through the federal Radiation Emitting Devices Regulations under the *Radiation Emitting Devices Act* and through the Medical Devices Regulations under the *Food and Drugs Act*.

If a given piece of radiation equipment is not permitted to be used in Canada (for example, through Canada's federal Radiation Emitting Devices regulations or Medical Devices regulations), an inspection agency may note this in an inspection report, and a registration agency must decline issuing a registration certificate for such equipment on this basis. In addition, an inspection agency, registration agency or Director may refer any matter of possible non-compliance with federal legislation to the federal regulator as appropriate.

## 2.4 Limitations on agency authority

A radiation agency may provide information or education to employers or other work site parties on OHS matters beyond radiation health and safety, which is within their sphere of knowledge and scope. However, a registration agency must not create additional rules or withhold a registration certificate for any item not directly applicable to the radiation equipment or the area of a facility in which the radiation equipment is installed.

If there is concern over a requirement put in place by a radiation agency, the matter may be referred to a Director for decision. If a Director is of the opinion that a registration agency has exceeded its authority under the Program, that Director may require the registration agency to remove the requirement and issue a registration certificate.

# 3.0 Agency recruitment

## 3.1 Qualifications and application process for becoming an agency

To apply to become a radiation agency (inspection agency or registration agency) an organization must submit a written application to Director, OHS Specialized Professional Services, Labour and Immigration, at [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca). The application must include:

- the name and description of the agency including contact information;
- a description of how business requirements outlined in Appendix A (inspection agency) or Appendix B (registration agency) will be met;
- a description of staff qualifications demonstrating how they meet the requirements in Appendix A or Appendix B;
- a description of how conflict of interest will be prevented (in general, plus see also Appendix A and Appendix B);
- an agency manual; and
- additional information as outlined in Appendix A or Appendix B.

## 3.2 Agency designation

At the Director's discretion and if the Program's application requirements are met, a Director may issue a Director Order to designate a radiation agency under Section 58 of the OHS Act. The Order may include any terms and conditions the Director determines the agency must follow.

In making a decision, the Director must consider whether the applicant meets the Program's application requirements, and may consider relevant factors, including, but not limited to whether:

- the applicant is qualified;
- the applicant intends to provide services in Alberta;
- an applicant seeking to become a registration agency is a self-governing body with oversight over a profession;
- an existing registration agency already covers a given sector of the economy;
- there are any applicable interprovincial or international trade agreements;
- there is any potential for conflict of interest including potential remedies.

A Director may also consider designating radiation agencies approved by governments in other Canadian jurisdictions as long as the Director is satisfied that Alberta's radiation protection standards are met in the process.

At the Director's discretion, a Director may refuse to grant registration agency status to an applicant. A Director may revoke agency status where the Director deems that the agency is not fulfilling its obligations under the Program.

In addition, a Director may deem an inspection agency's inspector unqualified if the Director has assessed, based on available documentation, that the minimum qualifications as outlined in the Guide are not met or that the inspector is unqualified for some other reason.

### 3.3 Transitional

#### 3.3.1 Agency designation

At the Director's discretion, to maintain Program continuity, a Director may designate agencies that were authorized under the Radiation Health Administration Regulation (*Government Organization Act*) immediately prior to the creation of this Program without the agencies needing to submit an application as follows:

- an "Authorized Radiation Protection Agency" (ARPA) may be designated as an "Authorized Radiation Protection Inspection Agency";
- an "Authorized Radiation Health Administrative Organization" (ARHAO) may be designated as an "Authorized Radiation Health Registration Agency".

#### 3.3.2 Agency manuals

Radiation agencies authorized under the previous Radiation Protection Program who have transitioned into this Program must update their agency manuals (formerly called Quality Management Plans) to reflect changes to the program and provide a copy to a Director by email at [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca) by March 31, 2022.

#### 3.3.3 Program records

ARPA and ARHAO records that existed immediately prior to the creation of this Program belong to the applicable radiation agency. To maintain Program continuity, these records are subject to Program reporting and information sharing requirements as outlined in section 4.8 of this Guide.

#### 3.3.4 Existing registration certificates

To maintain Program continuity, a registration certificate for radiation equipment that was valid immediately prior to the creation of this Program remains valid as per the registration certificate's expiry date, terms and conditions.

## 4.0 Agency roles and responsibilities

### 4.1 General

Radiation agencies must fulfill their duties as outlined in this Guide, remain qualified as described in this Guide, and fulfill their duties as outlined in the Director Order that designates the agency. In addition, radiation agencies are responsible for fulfilling "service provider" obligations under Section 7 of the OHS Act.

### 4.2 Inspections

An employer may request the services of an inspection agency to:

- inspect the employer's radiation equipment;
- inspect the facility in which the radiation equipment is installed;
- review the employer's code of practice for radiation equipment; or
- assist the employer in investigating a radiation incident.

An inspection agency may conduct inspections of radiation equipment, including the area of a facility where the radiation equipment is installed. When conducting an inspection, the agency must inspect the use, operation, handling, installation,

calibration, testing, demonstration, service, repair, maintenance or disposal of equipment, as applicable, as well as the immediate area of the facility where the equipment is installed. Following an inspection, the agency must prepare an inspection report outlining aspects that are compliant with the standards and any gaps where the standards are not being met.

When conducting an inspection, the inspection agency must assess equipment and work site party adherence with OHS Code requirements in:

- Part 20, Radiation Exposure; and
- Part 3, Specifications and Certifications.

When conducting an inspection, an inspection agency may assess:

- radiation equipment manufacturer's specifications (whether work site is following);
- radiation equipment maintenance (whether equipment is maintained);
- safe work procedures (whether the employer has safe work procedures for use of radiation equipment that covers key items such as how to turn radiation equipment on and off, how to turn the equipment off in an emergency, the use of safety goggles or shielding where needed, and instructions for activating manual warning devices where needed);
- structural shielding (is it in place where needed; can be validated through reviewing work site's documentation, through observation, or through performing measurements);
- X-ray equipment installation, use, compliance with Health Canada Safety Codes;
- laser equipment compliance with Canadian Standards Association or American National Standards Institute standards;
- monitoring of worker exposure to ionizing radiation (dosimetry) (whether work site is doing; can be validated by observing personal dosimeters being worn by workers, or by viewing documentation of dosimetry service provider invoices);
- additional protections for pregnant and young workers to limit exposure to radiation (whether work site has procedures in place where applicable); and
- designated radiation equipment – registration certificate required (work site has the required registration certificates for equipment that is in service).

An inspection agency may note in an inspection report whether the radiation equipment is permitted to be used in Canada as per federal legislation (see Section 2.3 of this Guide, Alignment with federal legislation).

An inspection agency must conduct inspections in person at the work site where the radiation equipment is located. The exceptions are as follows:

- **Remote inspections for lasers.** For inspections conducted to renew a registration certificate, in-person inspections are not required but are best practice and should be done where feasible. Remote inspections may be feasible, for example, for remote or difficult to access locations. Remote inspections of lasers may be conducted via electronic means (e.g., video connection, emailed information, telephone). An inspection agency may determine whether a remote inspection is appropriate. However, if a remote inspection is conducted, the inspector must already be familiar with the facility and ensure that a remote inspection covers everything that would be covered in an in-person inspection. A registration agency that is also a regulatory college may, at its discretion for its regulated members, require that all inspections be conducted in person if such a stipulation is made under authority of its professional legislation (see section 2.2 of this Guide). **Note that a new laser installation always requires an in-person inspection.**
- **Code of practice for portable radiation equipment (industrial radiography and laser light show temporary work sites).** Where it is not feasible for an inspection agency to conduct an in person inspection of portable industrial radiography or laser light show entertainment equipment, a code of practice approved by the inspection agency may be used to satisfy the inspection requirement. To provide context, under these work conditions, engineering controls may be limited and strict adherence to administrative controls by a work site party is necessary to reduce the likelihood of radiation incidents including unintentional exposures. In order to be approved, a code of practice, must:
  - contain practical guidance on the safe use of the equipment;
  - contain safe working and operating procedures for the equipment;
  - include actions to be taken in emergency situations; and
  - take into consideration any relevant requirements in Part 3 and Part 20 of the OHS Code including the content of any applicable standards referenced in Part 20 of the OHS Code (such as Health Canada Safety Code 34 or ANSI Standard Z136.1).

An inspection agency, at its discretion and where feasible, may physically inspect the portable radiation equipment in conjunction with reviewing a code of practice.

### 4.3 Registration certificates

As per Part 20 of the OHS Code, an employer must use the services of a registration agency to register the employer's radiation equipment. In an instance where there is uncertainty over the most appropriate registration agency, a Director may make a decision as to the appropriate registration agency.

A registration agency may issue registration certificates for radiation equipment. A registration agency must only issue a registration certificate if an inspection agency has confirmed, through an inspection report, that the radiation equipment and the facility in which it is installed, or a code of practice for the radiation equipment, is compliant with applicable OHS legislation and any relevant requirements as described in this Guide.

The registration certificate must include the following information (unless denoted as optional), and be valid for up to five years:

- Certificate title which reads: "Registration Certificate for Designated Radiation Equipment"
- Certificate description which reads: "The designated radiation equipment described (below) (above) (in this certificate) is registered under Alberta's Radiation Protection Program for the purposes of satisfying the registration certificate requirement under section 291.7 of the Occupational Health and Safety Code."
- Employer name and address; plus facility name and address (if different than employer name and address)
- *Optional*: facility identification, facility type, or department (in which the radiation equipment is located)
- Equipment type (e.g., Class 4 Laser)
- Serial number
- Manufacturer
- Model
- *Optional*: Location within facility (if applicable)
- *Optional*: Equipment number (if applicable)
- Terms and conditions (state "None" if none)
- Certificate number
- Date of issue (suggested format: Month, Day, Year)
- Expiry date (suggested format: Month, Day, Year) (not to exceed five years from the date of issue)
- Signature of registration agency representative (may be digitally signed)
- Name of registration agency followed by "Authorized Radiation Health Registration Agency"
- *Optional*: Logo of registration agency
- *Optional*: Gold seal or similar marking
- *Optional*: Helpful information such as: "As per section 291.7 of the OHS Code, a copy of this certificate must be posted near the equipment, or if this is not practicable, its content communicated to affected workers."

At the discretion of the registration agency, multiple pieces of equipment may be listed on a single registration certificate. Registration agencies are encouraged to make all registration certificates valid for five years by default, unless there is an objective reason for why the period should be shorter (e.g., a recommendation by an inspection agency for a given piece of equipment that suggests a more frequent inspection is needed for safety reasons). To facilitate registration certificate renewal, a registration agency may issue up to a 60-day extension to a registration certificate to allow an inspection agency sufficient time to complete their work or for an employer to take corrective actions following an inspection so long as health and safety is not compromised during this period.

A registration agency must consider information provided by an inspection agency to inform any terms and conditions in a registration certificate. In order to be considered, the issue date of an inspection report reviewed by a registration agency must be no older than six months; however, individual elements with an inspection report (e.g., a radiation survey of a facility, or facility design drawings) may be older than six months.

A registration agency may:

- make a registration certificate subject to any terms and conditions that the registration agency considers appropriate for the protection of workers and other persons at or near the work site in which the radiation equipment is to be used;

- vary, suspend or revoke a registration certificate if:
  - the conditions under which the registration certificate was issued have changed;
  - the terms and conditions in an issued registration certificate have not been complied with;
  - the radiation equipment specified in the registration certificate has been sold, transferred, removed from service or disposed of;
  - the operation of the radiation equipment listed on the registration certificate constitutes or may constitute a hazard to persons or is not permitted under federal legislation to be used in Canada;
  - a provision of the OHS legislation relating to the installation, use, operation, maintenance or repair of radiation equipment has been contravened.

A valid registration certificate issued by a registration agency is recognized for the purpose of meeting the registration certificate requirements of Part 20 of the OHS Code.

## 4.4 Service standards

Radiation agencies must work with professionalism and provide timely services.

Agencies must be reachable through their contact information that is published on the Government of Alberta's OHS website, and respond to telephone calls, emails and other forms of communications from the Agency's clients, other radiation agencies, and a Director within 10 business days. An exception to this is that an agency may provide a notice of absence (e.g., a "vacation notice") to a Director, other agencies they work with, and their clients when they may be unreachable for more than 10 business days as part of a planned absence.

Registration agencies must process radiation equipment application forms within 30 business days, unless additional processing time is needed due to findings of an inspection agency that requires corrective action. Inspection agencies or registration agencies that impose a fee for service must provide inspection reports or registration certificates to their clients within 10 business days of being paid, unless they provided a notice of absence as noted above, in which case the time may be extended until the agency is once again available.

An agency that is not able to meet its service standards, even if temporarily, must inform a Director in writing by email to [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca).

An inspection agency wishing to no longer be an inspection agency must provide a Director with 120 days of notice in writing by email to [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca). A registration agency wishing to no longer be a registration agency must provide a Director with 240 days of notice in writing by email to [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca).

## 4.5 Agency manual

A radiation agency must ensure that its agency manual remains up-to-date, and notify a Director of any updates to the manual by providing a copy of the manual to a Director by email at [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca). Updated manuals do not need to be approved by a Director, but their content will be subject to audit by a Director, and a Director may require that a Radiation Agency makes changes to its manual.

## 4.6 Records retention

Radiation agency records belong to the applicable radiation agency. Radiation agencies are responsible for their own records and must ensure the records are managed as outlined in this Guide.

Inspection records must be retained by an inspection agency for a minimum of five years following the date on which an inspection occurs. Registration certificate records must be retained by a registration agency for a minimum of five years following the date on which a registration certificate is suspended, revoked or expires. Once the minimum records retention period has concluded, a radiation agency may dispose of the Program records so long as they are disposed in a secure manner. A radiation agency that disposes of Program records must be able to demonstrate to a Director which records were disposed including when and how the records were disposed.

Registration agencies must retain an off-site records backup. All records, including electronic records, must be stored within Canada. In addition, a radiation agency must provide records to a Director upon the Director's request at no cost and in a format acceptable to the Director. If a registration agency ceases to be a registration agency, the registration agency must provide an electronic copy of all Program records to a Director prior to ceasing to be a registration agency.

## 4.7 Agency staff and subcontractors

Radiation agencies must ensure that the agency as well as agency staff remain qualified as per the qualifications outlined in Appendix A and Appendix B. Agencies must avoid conflicts of interest as outlined in Appendix A and Appendix B.

A radiation agency may subcontract or use the services of associates to supplement its own staff and if doing so, the Agency must first notify a Director in writing by email to [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca) and ensure its subcontractors or associates are qualified as per the qualifications outlined in Appendix A and B to perform the work. A radiation agency remains responsible for all work carried out under its own designation. In the event of non-compliance with the legislation or the Program requirements by a subcontractor or associate, the designated radiation agency will be held responsible, and may be subject to compliance measures, including orders, or the suspension or revocation of the Agency's designation. A Director, at the Director's sole discretion, may disallow any radiation agency from subcontracting or using associates.

A radiation agency may subcontract to another radiation agency. If this occurs, that work must be done under the subcontracted agency's designation (the documentation must make it clear which agency performed the work).

## 4.8 Program reporting and information sharing

A radiation agency must provide information about its services to a Director in a timely manner upon request by a Director. This may be either in relation to ad-hoc information requests or for annual reporting. Information requests may include, but are not limited to, information about agency or agency staff qualifications, information about individual inspections or registration certificates, and aggregate information about agency activity.

A radiation agency must submit annual reports to a Director, which include, at a minimum, the information presented in Appendix C. The reporting period for annual reports is per calendar year, and reports must be submitted to a Director by March 31 of the following year. Annual reports must be submitted by email to [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca).

Radiation agencies must communicate Program information between agencies and with a Director to facilitate successful delivery of the Program. Program information includes, but is not limited to, information about individual inspections or registration certificates, and information about a work site's compliance with OHS legislation as it applies to radiation health and safety.

A radiation agency may, in accordance with this Guide or with the approval of a Director, disclose information that the agency obtains while carrying out the functions of the agency. While a radiation agency may share information with other agencies, it is not obligated to share its proprietary or confidential business information when requested to do so by another agency.

## 4.9 Insurance

Radiation agencies must hold valid insurance including:

- general commercial liability: including personal injury, bodily injury, and property damage: \$2 million per occurrence;
- "all risks" valuable papers and records: usually a rider on the general liability policy: adequate to enable reconstruction; and
- Workers' Compensation Board coverage.

In addition to holding the above insurance, inspection agencies must hold valid insurance including:

- \$1 million per occurrence for professional liability/errors and omissions: where the inspection agency employs individuals who have a recognized professional designation; and
- automobile liability insurance of not less than \$2 million on all vehicles owned, operated or licensed in the name of the inspection agency and used in the delivery of the services..

## 5.0 Audit and public accountability

To maintain the integrity of the Program, radiation agencies are subject to audit or other inquiries as required by a Director. The purpose of an audit or other inquiry is to ensure compliance with the Program requirements. Radiation agencies must provide the Director with full and unfettered access to all Program records and implement corrective actions where an audit or other inquiry by a Director identifies deficiencies. Public accountability for the Program is subject to reporting through the Labour and Immigration annual report.

## 6.0 Complaints process

Informal complaints concerning the conduct of a radiation agency should be addressed by the agency directly, such as through the agency's internal complaints process. Agencies may communicate between themselves as needed to resolve an informal complaint. Complaints are encouraged to be addressed informally where possible. A Director may also facilitate conversations to help resolve informal complaints.

A Director will review written complaints concerning the conduct of a radiation agency. The Director may ask each party to provide information, in writing, regarding circumstances surrounding the complaint. Remedies available to the Director include:

- identifying a non-regulatory solution that addresses the complaint;
- in the case of non-compliance with the Program or with service provider obligations under the OHS Act, an order or administrative penalty issued under the OHS Act;
- in the case of a radiation agency not fulfilling its obligations under the Program, revoking agency status; and
- communicating the outcome of a complaint to affected parties.

# Appendix A – Qualifications for becoming an inspection agency

In order for an individual or organization to become and remain an inspection agency, the individual or organization must meet specific qualifications, develop an agency manual, and be designated by a Director. This appendix outlines inspection agency qualifications and content requirements for the agency manual.

## A1.0 Qualification requirements

As a part of the process to become and remain an inspection agency, an individual or organization must meet, and continue to meet, minimum qualifications in a number of areas including:

- business requirements;
- staff qualifications; and
- avoiding conflicts of interest.

### A1.1 Business requirements

An inspection agency must ensure it meets the following business requirements:

- fulfilling the roles and responsibilities as outlined in the Program; if applying to become an agency, confirming in writing that all roles and responsibilities will be fulfilled;
- having a data management system to store inspection report data for a minimum of five years; and
- correcting in a timely way any gaps in qualifications that are identified in an audit or by a Director.

### A1.2 Staff qualifications

An inspection agency must ensure that their staff:

- understand this Program, their roles and responsibilities under the Program, and are competent to perform their role;
- are trained on applicable OHS legislation to the degree that is relevant to their role in the agency; and
- understand the agency's manual.

In addition, an inspection agency must ensure their inspection staff:

- meet the qualifications outlined in any row of either Table A1, Table A2, or both;
- only inspect X-ray equipment if they meet the qualifications outlined in any row of Table A1;
- only inspect laser equipment if they meet the qualifications outlined in any row of Table A2; and
- understand Part 20 of the OHS Code and the standards adopted under Part 20 of the OHS Code to the degree that is relevant for the inspections (scope of work) the staff perform.

An inspection agency must assess their staff's qualifications and have and implement a plan to ensure their staff are competent to perform their roles under the Program.

The inspection agency must retain, and have available for audit, documentation of inspector qualifications. Examples of documentation include curriculum vitae (CV), confirmation of education (degrees, course certificates, etc.), confirmation of professional designation, confirmation of experience (e.g., letters from current or past employers verifying the type and years of experience). A Director may deem an inspector unqualified if the Director has assessed, based on the documentation, that the minimum qualifications are not met.

**TABLE A1: INSPECTION AGENCY INSPECTOR QUALIFICATIONS – X-RAY EQUIPMENT**

| Row | Education or professional designation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Experience                                               |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 1   | <p>Relevant professional designation (science based), combined with working within the individual's area of professional competence</p> <p>This includes:</p> <ul style="list-style-type: none"> <li>• Member of the Canadian College of Physicists in Medicine (MCCPM) (<a href="http://www.ccpm.ca">www.ccpm.ca</a>)</li> <li>• Qualified Medical Physicist (American Association of Physicists in Medicine; <a href="http://www.aapm.org">www.aapm.org</a>)</li> <li>• Professional Chemist (<a href="http://www.pchem.ca">www.pchem.ca</a>)</li> <li>• Certified Industrial Hygienist (<a href="http://www.abih.org">www.abih.org</a>)</li> <li>• Registered Occupational Hygienist (<a href="http://www.crboh.ca">www.crboh.ca</a>)</li> <li>• Professional Engineer (<a href="http://www.apega.ca">www.apega.ca</a>)</li> </ul> | As per professional standards of the accreditation body. |
| 2   | <p>Relevant degree (science based)</p> <p>This includes:</p> <ul style="list-style-type: none"> <li>• physics, biophysics, health physics, medical physics, nuclear engineering, biomedical engineering, chemistry</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Two years' experience in a relevant radiation field.     |
| 3   | <p>Relevant diploma of technology</p> <p>This includes:</p> <ul style="list-style-type: none"> <li>• medical radiation technology (nuclear medicine, radiography, or radiation therapy)</li> <li>• biomedical engineering technologist (BMET)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Three years' experience in a relevant radiation field.   |
| 4   | <p>Relevant university or college program certificate combined with Radiation Safety Officer training</p> <p>Course work must include all of the following:</p> <ul style="list-style-type: none"> <li>• ionizing radiation – physics, biology, protection and detection instrumentation</li> <li>• Radiation Safety Officer training</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Five years' experience in a relevant radiation field.    |

**TABLE A2: INSPECTION AGENCY INSPECTOR QUALIFICATIONS – LASER EQUIPMENT**

| Row | Education or professional designation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Experience                                               |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 1   | Relevant professional designation (science based), combined with working within an individual's area of professional competence<br>This includes: <ul style="list-style-type: none"> <li>• Certified Laser Safety Officer (CLSO) (The Board of Laser Safety; <a href="http://www.lasersafety.org">www.lasersafety.org</a>)</li> <li>• Certified Medical Laser Safety Officer (CMLSO) (The Board of Laser Safety; <a href="http://www.lasersafety.org">www.lasersafety.org</a>)</li> <li>• Professional Chemist (<a href="http://www.pchem.ca">www.pchem.ca</a>)</li> <li>• Certified Industrial Hygienist (<a href="http://www.abih.org">www.abih.org</a>)</li> <li>• Registered Occupational Hygienist (<a href="http://www.crboh.ca">www.crboh.ca</a>)</li> <li>• Professional Engineer (<a href="http://www.apega.ca">www.apega.ca</a>)</li> </ul> | As per professional standards of the accreditation body. |
| 2   | Relevant degree (Science based)<br>This includes: <ul style="list-style-type: none"> <li>• physics, biophysics, health physics, medical physics, nuclear engineering, chemistry</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Two years' experience in a relevant radiation field.     |
| 3   | Diploma of technology<br>This includes: <ul style="list-style-type: none"> <li>• biomedical engineering technologist (BMET)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Three years' experience in a relevant radiation field.   |
| 4   | Relevant university or college program certificate combined with Laser Safety Officer training<br>Course work must include all of the following: <ul style="list-style-type: none"> <li>• laser – physics, classification, hazards and health effects</li> <li>• Laser Safety Officer training</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Five years' experience in a relevant radiation field.    |
| 5   | Other course work<br>Any of: <ul style="list-style-type: none"> <li>• Laser Safety Officer with hazard analysis certification from the Laser Institute of America (<a href="http://www.lia.org">www.lia.org</a>)</li> <li>• University of Toronto Laser Safety Program (<a href="http://ehs.utoronto.ca/our-services/laser-safety">ehs.utoronto.ca/our-services/laser-safety</a>)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Five years' experience in a relevant radiation field     |

### A1.3 Avoiding conflicts of interest

#### A1.3.1 General

The inspection agency must ensure there is no conflict of interest or apparent conflict of interest on the part of the agency or its employees, subcontractors or agents in relation to the services, and that all services are performed in accordance with high ethical standards, including, but not limited to, the following:

- where the services involve providing advice, making recommendations to a Director or exercising discretionary authority regarding a right, permission, privilege, status, contract or benefit, then such advice, recommendations or discretion must be provided, made or carried out impartially and without bias;
- the inspection agency and its employees, subcontractors and agents must not have any financial interest in the business of a third party that causes, or would appear to cause, a conflict of interest in connection with the performance of the services;
- the inspection agency, upon request by a Director, will deliver copies of all written ethical standards, conflict of interest policies and codes of conduct the agency uses in its business practices or in relation to its employees, subcontractors or agents; and
- the inspection agency must comply with, and ensure that, its employees, subcontractors and agents comply with, the *Lobbyists Act* (Alberta), as amended from time to time.

In the event the inspection agency becomes aware of any matter that causes or is likely to cause a conflict of interest in relation to the performance of the services, the inspection agency must immediately disclose the matter to a Director in writing by email at [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca). Once the matter is disclosed, the inspection agency must not commence or continue performing services without written consent of a Director.

If a Director is of the opinion the inspection agency or its employees, subcontractors or agents are in a conflict of interest, a Director may revoke agency status.

### A1.3.2 Inspection of equipment owned by inspection agency

An organization that owns or operates designated radiation equipment may apply to become an inspection agency, if they meet the conflict of interest criteria, as well as the business requirements and staff qualifications above.

The organization's application must clarify how it will resolve any real or perceived conflicts of interest with respect to the day to day operation of the equipment owned by the agency's employer, and any design or construction activities which the applicant could be engaged in. If there is a potential conflict, the applicant must explain how staff will perform compliance services and make independent decisions concerning radiation equipment without bias or undue influence from the owner of the equipment.

Criteria:

- only multi-facility equipment owners may apply; multi-facility can mean different institutions or different departments within an institution;
- inspection agency personnel may be employees of the equipment owner or employed by an employer who uses radiation equipment, but must not be engaged in, or have connections with, the day to day operation of the radiation equipment as part of their regular job duties;
- inspection agency personnel must not provide compliance verification testing of radiation equipment if they have been involved in providing design and/or installation services for the equipment; as an exception to this, that person may provide compliance verification testing if another person in the agency (or a subcontracted inspection agency) reviews and validates in writing the design and/or installation plans prior to installation and compliance verification testing;
- inspection agency personnel must not report directly to persons involved with the day to day operation of the radiation equipment while they are performing the duties and functions delegated to them as an inspection agency; inspection agency personnel must act as an unbiased third party in the provision of these services.

## A2.0 Inspection agency manual

The inspection agency manual describes the processes the inspection agency follows to meet its roles and obligations.

The manual must contain the following sections:

### 1. Scope of inspection agency

The function of this section is to identify the inspection agency, the type of equipment and facilities that the inspection agency provides (or proposes to provide) service to. The services that are offered may include such functions as testing of equipment, reviews of facility design/shielding and personal protective equipment, and site inspections.

### 2. Management commitment

This section outlines the commitment of management and staff of the inspection agency to the roles and responsibilities of an agency as outlined in the Program. It includes a commitment to the policies described in the manual and identifies the person in the company who is responsible for ensuring the manual is followed.

### 3. Organization chart

The chart describes the part of the organization that will be responsible for delivery of the manual, the person responsible for the Program, administrative management of the organization and the technical staff employed.

### 4. Provision of qualified staff

This section outlines the policy with respect to staff meeting the qualification criteria for the types of equipment and facilities where services are provided. The inspection agency must commit to keep up to date records of qualified staff employed.

### 5. Training policy

The inspection agency must identify how it will maintain the competency level of the qualified staff if there are relevant changes in codes, standards, and regulations. This section must include a specific plan on how competency will be assessed.

### 6. Compliance services

This section expands on the specific services outlined in the Scope section and describes the basic policies and procedures related to compliance services the inspection agency will be providing. It includes a description of each service, a list of the tests to be performed, and should be inclusive as well as specific. Address how to report to equipment owners and registration agencies in this section; also include appendices with compliance verification forms and sample report formats for the different types of equipment tested, as well as documents such as checklists and inspection templates.

## **7. Records management**

The inspection agency must maintain records. This section will outline the records management plan. Records must be maintained as described in this Guide and be made available for audit purposes. In addition, an inspection agency must provide records to a Director upon the Director's request.

## **8. Conflict of interest**

An inspection agency that wishes to inspect its own organization's radiation equipment must establish a conflict of interest guideline that clearly addresses how conflict of interest will be avoided. The inspection agency must also clarify how it will resolve any real or perceived conflicts of interest with respect to the day to day operation of the equipment owned by their employer, and any design or construction activities which the inspection agency could be engaged in. If there is a potential conflict, the inspection agency must explain how staff will perform inspection services and make independent decisions concerning radiation equipment without bias or undue influence from the owner of the equipment or from other parties.

## **9. Appendices**

Appendices in support of the body of the manual should include the following:

- compliance verification form templates;
- sample report formats for various types of equipment being tested (for submission to the clients);
- policies and procedures for the agency (where not otherwise covered in the main body of the manual); and
- list of test equipment.

## Appendix B – Qualifications for becoming a registration agency

In order for an organization to become and remain a registration agency, the organization must meet specific qualifications, develop an agency manual and be designated by a Director. This appendix outlines registration agency qualifications and content requirements for the agency manual.

### B1.0 Qualification requirements

Registration agencies are typically regulatory colleges, associations, or large post-secondary institutions, as such organizations can be well positioned to provide registration services.

As a part of the process to become and remain a registration agency, an organization must meet, and continue to meet, minimum qualifications in a number of areas including:

- business requirements;
- staff qualifications; and
- avoiding conflicts of interest.

#### B1.1 Business requirements

A registration agency must ensure it meets the following business requirements:

- fulfilling the roles and responsibilities as outlined in the Program; if applying to become an agency, confirming in writing that all roles and responsibilities will be fulfilled;
- have a data management system to store data for a minimum of ten years (the system must provide duplication of records, either electronic or paper based; all files must be stored within Canada and allow for a minimum of daily back up); and
- correcting in a timely way any gaps in qualifications that are identified in an audit or by a Director.

#### B1.2 Staff qualifications

A registration agency must ensure that their staff:

- understand this Program, their roles and responsibilities under the Program, and are competent to perform their role;
- are trained on applicable OHS legislation to the degree that is relevant to their role in the agency; and
- understand the agency's manual.

A registration agency must assess their staff's qualifications, and have and implement a plan to ensure their staff are competent to perform their roles under the Program.

#### B1.3 Avoiding conflicts of interest

##### B1.3.1 General

The registration agency must ensure that there is no conflict of interest or apparent conflict of interest on the part of the agency or its employees, subcontractors or agents in relation to the services, and that all services are performed in accordance with high ethical standards, including, but not limited to, the following:

- where the services involve providing advice, making recommendations to a Director or exercising discretionary authority regarding a right, permission, privilege, status, contract or benefit, then such advice, recommendations or discretion must be provided, made or carried out impartially and without bias;
- the registration agency and its employees, subcontractors and agents must not have any financial interest in the business of a third party that causes, or would appear to cause, a conflict of interest in connection with the performance of the services;
- the registration agency, upon request by a Director, must deliver copies of all written ethical standards, conflict of interest policies and codes of conduct the agency uses in its business practices or in relation to its employees, subcontractors or agents; and
- the registration agency must comply with, and ensure that, its employees, subcontractors and agents comply with, the *Lobbyists Act* (Alberta), as amended from time to time.

In the event the registration agency becomes aware of any matter that causes or is likely to cause a conflict of interest in relation to the performance of the services, the organization must immediately disclose the matter to a Director in writing by

email at [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca). Once the matter is disclosed, the organization must not commence or continue performing services without the written consent of a Director.

If a Director is of the opinion the registration agency or its employees, subcontractors or agents are in a conflict of interest, a Director may revoke agency status.

### **B1.3.2 Registration of equipment owned by registration agencies**

An organization that owns or operates designated radiation equipment may apply to become a registration agency, if they meet the conflict of interest criteria, as well as the business requirements and staff qualifications above.

The organization's application must clarify how it will resolve any real or perceived conflicts of interest with respect to the day to day operation of the equipment owned by their employer and any design or construction activities which the applicant could be engaged in.

Criteria:

- only multi-facility equipment owners may apply; multi-facility can mean different institutions or different departments within an institution;
- registration agency personnel may be employees of the equipment owner or employed by an employer who uses radiation equipment, but must not be engaged in, or have connections with, the day to day operation of the radiation equipment as part of their regular job duties;
- registration agency personnel will not report directly to persons involved with the day to day operation of the radiation equipment while they are performing the duties and functions delegated to them as a registration agency; and
- registration agency personnel must act as an unbiased third party in the provision of these services.

## **B2.0 Registration agency manual**

The registration agency manual describes the processes the registration agency follows to meet its roles and obligations.

The manual must contain the following sections:

### **1. Scope of registration agency**

This section identifies the registration agency, the type of equipment and facilities that the registration agency is (or proposes to be) responsible for and the type of services the registration agency is (or proposes) to provide.

### **2. Management commitment**

This section outlines the commitment of management and staff of the registration agency to the roles and responsibilities of an agency as outlined in the Program. It includes a commitment to the policies described in the manual and identifies the person in the company who will be responsible for ensuring the manual is followed.

### **3. Organization chart**

The chart shows the part of the organization that will be responsible for delivery of the manual, the person responsible for the Program, and the administrative management of the organization.

### **4. Information systems**

This section describes the electronic database used and the records and documents being maintained by the registration agency.

### **5. Policies and procedures**

This section outlines the policies and procedures related to administration of the registration agency's duties. This section should include documents such as:

- compliance monitoring checklist
- registration certificate
- application for registration form

### **6. Records management**

The registration agency must maintain records. This section will outline the records management plan. Records must be maintained as described in this Guide and be made available for audit purposes. In addition, a registration agency must provide records to a Director upon the Director's request.

## **7. Conflict of interest**

A registration agency that wishes to register its organization's own radiation equipment must establish a conflict of interest guideline that clearly show how conflict of interest will be avoided. The registration agency must also clarify how it will resolve any real or perceived conflicts of interest with respect to the day to day operation of the equipment owned by their employer. If there is a potential conflict, the registration agency must explain how staff will perform registration services without bias or undue influence from the owner of the equipment or from other parties.

## **8. Appendices**

Appendices in support of the body of the manual should include at a minimum the following:

- compliance monitoring checklist;
- registration certificate template; and
- application for Registration form.

## Appendix C – Annual report for radiation agencies

### Agency activities

|                                                           |                                              |
|-----------------------------------------------------------|----------------------------------------------|
| Agency name:                                              | _____                                        |
| Street address:                                           | _____                                        |
| City, Province, Postal code:                              | _____                                        |
| Reporting year:                                           | _____ (enter calendar year)                  |
| Reporting activities undertaken as an (please check one): |                                              |
| <input type="checkbox"/> Inspection agency                | <input type="checkbox"/> Registration agency |

**Inspection agency** please list inspection activities undertaken during reporting year:

| Activity                                      | X-ray | Laser | Other |
|-----------------------------------------------|-------|-------|-------|
| Number of inspections performed               |       |       |       |
| Total number of pieces of equipment inspected |       |       |       |

**Registration agency** please list registration activities undertaken:

| Activity                                                                                                  | X-ray | Laser | Other |
|-----------------------------------------------------------------------------------------------------------|-------|-------|-------|
| Number of pieces of equipment registered during reporting year                                            |       |       |       |
| Number of suspended or cancelled equipment registrations during reporting year                            |       |       |       |
| Total number of pieces of equipment with an active registration as of December 31 of reporting year       |       |       |       |
| Total number of active facilities with designated radiation equipment as of December 31 of reporting year |       |       |       |

I certify that the above information is complete and accurate.

\_\_\_\_\_ Date: \_\_\_\_\_

Signature of agency administrator

\_\_\_\_\_  
Print or type name

*A copy of this report must be submitted by email to [LBR.RadiationProgram@gov.ab.ca](mailto:LBR.RadiationProgram@gov.ab.ca) by March 31 of the year following the reporting year.*