Newfoundland and Labrador Regulation 2024

NEWFOUNDLAND AND LABRADOR
REGULATION 58/24

Radiation Health and Safety Regulations, 2024
under the
Radiation Health and Safety Act, 2021
(O.C. 2024-140)

(Filed September 5, 2024)

Under the authority of section 25 of the *Radiation Health and Safety Act, 2021,* the Lieutenant-Governor in Council makes the following regulations.

Dated at St. John's, September 4, 2024.

Krista Quinlan
Clerk of the Executive Council

REGULATIONS

Analysis

Short title

1. These regulations may be cited as the *Radiation Health and Safety Regulations, 2024*.

Interpretation

2. (1) In these regulations

(a) "acceptance testing" means a process to confirm if radiation equipment is performing in compliance with

(i) the manufacturer's performance specifications,

(ii) the Act and these regulations, and

(iii) the federal legislation;

(b) "Act" means the *Radiation Health and Safety Act, 2021*;

(c) "controlled area" means the immediate area where radiation equipment is used, including the procedure room and the control booth;

(d) "dosimeter" means a personal radiation monitoring device that monitors a person's exposure to ionizing radiation;

(e) "federal legislation" means the following:

(i) *Food and Drugs Act* (Canada),

(ii) *Medical Devices Regulations* (Canada),

(iii) *Radiation Emitting Devices Act* (Canada), and

(iv) *Radiation Emitting Devices Regulations* (Canada);

(f) "installation date" means the date that

(i) stationary radiation equipment is installed in a radiation facility, and

(ii) mobile radiation equipment is placed in a radiation facility;

(g) "lead equivalence" means the level of protection expressed as the thickness of lead that would provide the same attenuation as the material used in x-ray protective equipment;

(h) "mobile radiation equipment" means radiation equipment that is intended to be moved from one location of use to another location of use;

(i) "National Dose Registry" means the centralized record-keeping system containing the

personal dosimetry records of radiation workers in Canada that is maintained by Health Canada;

(j) "occupational health and safety committee" means an occupational health and safety committee established for a workplace in accordance with the *Occupational Health and Safety Act*;

(k) "operational date" means the date that radiation equipment is first used;

(l) "reporting period" means the period of time set by a dosimetry service provider which shall not exceed 3 months;

(m) "stationary radiation equipment" means

(i) radiation equipment that is installed in a fixed location,

(ii) radiation equipment that is placed for use in a vehicle or other movable facility, and

(iii) mobile radiation equipment that is routinely used in one location in a radiation facility;

(n) "uncontrolled area" means an area in a radiation facility that is not a controlled area including areas occupied by individuals, such as patients, visitors and employees who do not routinely work with or around radiation equipment; and

(o) "worker health and safety representative" means a worker health and safety representative designated for a workplace in accordance with the *Occupational Health and Safety Act*.

(2) For the purpose of the Act and these regulations, "maximum permissible dose of radiation" means the most recent recommended dose limits for planned exposure situations set by the International Commission on Radiological Protection.

(3) For the purposes of paragraphs 13(a) and 25(1)(n) of the Act and sections 14 and 16 of these regulations, "authorize" includes "prescribe".

Safety Codes adopted

3. (1) The following safety codes are adopted:

(a) Safety Code 28 – *Radiation Protection in Veterinary Medicine – Recommended Safety Procedures for Installation and Use of Veterinary X-ray Equipment*, published by Health Canada;

(b) Safety Code 29 – *Requirements for the Safe Use of Baggage X-ray Inspection Systems*, published by Health Canada;

(c) Safety Code 30 – *Radiation Protection in Dentistry – Recommended Safety Procedures for the Use of Dental X-ray Equipment*, published by Health Canada with the exception of the following sections:

(i) Section A.3.0: Procedures for Minimizing Radiation Exposure to Patients, and

(ii) Section C: Quality Assurance Program;

(d) Safety Code 32 – *Safety Requirements and Guidance for Analytical X-ray Equipment*, published by Health Canada;

(e) Addendum to Safety Code 32 – *Portable, Hand-held, X-ray Tube Based Open-beam XRF Devices*, published by Health Canada;

(f) Safety Code 34 – *Radiation Protection and Safety for Industrial X-ray Equipment*, published by Health Canada;

(g) Safety Code 35 – *Safety Procedures for the Installation, Use and Control of X-ray Equipment in Large Medical Radiological Facilities*, published by Health Canada with the exception of the following sections:

(i) Section A.3.0: Procedures for Minimizing Radiation Exposure to Patients, and

(ii) Section C: Quality Assurance Program; and

(h) Safety Code 36 – *Radiation Protection and Quality Standards in Mammography - Safety Procedures for the Installation, Use and Control of Mammographic X-ray Equipment*, published by Health Canada with the exception of the following sections:

(i) Section A.3.0: Procedures for Minimizing Radiation Exposure to Patients, and

(ii) Section C: Quality Assurance Program.

(2) The most recent edition of a safety code adopted under subsection (1) shall apply.

(3) An owner or operator shall comply with the applicable safety code to the extent that the safety code is adopted under these regulations.

(4) Notwithstanding subsection (3), in the case of a discrepancy between a safety code adopted under this section, a manufacturer's guideline and these regulations, the safety code, guideline or regulation that provides the higher level of protection shall apply.

Display of certificate of registration

4. (1) A certificate of registration issued by the director for stationary radiation equipment shall be prominently displayed in close proximity to the radiation equipment.

(2) A copy of the certificate of registration for mobile radiation equipment shall be located in close proximity to the mobile radiation equipment at all times and shall be readily available for viewing.

(3) A certificate of registration referred to in this section shall be current, legible and unaltered.

Suspension and revocation of registration

5. The director may suspend or revoke the registration of radiation equipment where

(a) the director has reason to believe that the radiation equipment is not in compliance with the federal legislation;

(b) the director becomes aware that the manufacturer of the radiation equipment has determined that the radiation equipment is unsafe to operate and can no longer be serviced or repaired;

(c) the results of a radiation protection survey indicate that the radiation equipment is unsafe to operate;

(d) the results of acceptance testing indicate that radiation equipment is not performing in accordance with the manufacturer's performance specifications, the Act, these regulations or the federal legislation;

(e) the results of a lead shielding integrity assessment indicate that the lead shielding does not provide sufficient protection from radiation for radiation equipment to be operated safely;

(f) the radiation equipment has been involved in an incident involving a possible overexposure;

(g) the physical condition of the radiation equipment is such that it cannot be operated in a safe manner;

(h) the radiation equipment or the controlled area has been subjected to damage, temperature extremes, smoke, dust, water or any physical, chemical or biological agent that could result in the radiation equipment being unsafe to operate;

(i) the radiation equipment is not being operated or maintained in accordance with

(i) the manufacturer's safe use guidelines,

(ii) the applicable safety code, or

(iii) these regulations; or

(j) the director determines that it is in the public interest to suspend or revoke the registration for a reason other than a reason referred to in paragraphs (a) to (i).

Prohibition

6. An owner shall not install or operate or permit the installation or operation of radiation equipment, including components or accessories for such radiation equipment, unless the radiation equipment, components or accessories comply with the requirements in

(a) the Act and these regulations; and

(b) the federal legislation.

General responsibility of owner for safety

7. An owner shall ensure that radiation equipment is safe to operate and complies with the Act, these regulations, the applicable safety code and the federal legislation.

Installation, maintenance and repair of radiation equipment

8. (1) Radiation equipment shall be installed, maintained and repaired

(a) in accordance with the manufacturer's guidelines and the applicable safety code; and

(b) by either

(i) a service provider designated by the manufacturer, or

(ii) another service provider proposed by the owner and determined by the manufacturer to be acceptable to install, maintain or repair the radiation equipment.

(2) Where there is a conflict between the manufacturer's guidelines and the applicable safety code, the guideline or code that provides the higher level of protection shall be followed.

Acceptance testing

9. (1) Before the first use of newly installed radiation equipment that is for use on humans or animals, an owner shall arrange for acceptance testing to be performed on the radiation equipment in accordance with

(a) the applicable safety code; or

(b) the safety code referred to in paragraph 3(1)(g), where the applicable safety code does not provide guidance with respect to acceptance testing.

(2) Acceptance testing shall be performed by a person who, in the opinion of the director, has extensive knowledge of the following:

(a) the type of radiation equipment being tested;

(b) the manufacturer's specifications; and

(c) the applicable regulatory requirements.

(3) Where required by the applicable safety code, acceptance testing shall be performed by a person independent of the manufacturer.

(4) The director may waive the requirement in this section where the director determines that acceptance testing is not necessary in the circumstances.

Lead shielding integrity assessment

10. (1) An owner shall arrange for a lead shielding integrity assessment to be performed on a radiation facility in which stationary radiation equipment is installed or will be installed at the following times:

(a) for a new radiation facility, before first use of newly installed stationary radiation equipment; and

(b) for an existing radiation facility,

(i) before installation of new stationary radiation equipment, and

(ii) while alterations or repairs are being made to a controlled area.

(2) A lead shielding integrity assessment shall include

(a) a visual inspection of the lead shielding;

(b) a quantitative assessment of the attenuation of the walls, doors and windows of the controlled area; and

(c) other information or testing required by the director.

(3) A lead shielding integrity assessment shall be performed by a person who, in the opinion of the director, has extensive knowledge of radiation shielding design assessment and verification.

(4) The director may waive the requirement in this section where the director determines that a lead shielding integrity assessment is not necessary in the circumstances.

Provision of documentation to director

11. (1) Before the first use of newly installed radiation equipment, an owner shall provide the director with

(a) documentation, satisfactory to the director, confirming that the radiation equipment has been installed in accordance with section 8;

(b) a copy of the acceptance testing report where acceptance testing is performed under section 9; and

(c) a copy of the lead shielding integrity assessment where a lead shielding integrity assessment is performed under section 10.

(2) The documentation required under paragraph (1)(a) shall be prepared by

(a) a person authorized by the manufacturer; or

(b) another person who, in the opinion of the director, has the required knowledge and technical expertise.

12. (1) An owner shall ensure that radiation protection surveys are performed on all radiation equipment owned by the owner in accordance with the applicable safety code at the following times:

(a) before an owner applies to register radiation equipment that is newly installed or placed in a radiation facility;

(b) within 7 days after any unplanned exposure of a person to radiation;

(c) before use of the radiation equipment after

(i) any changes are made to the radiation equipment which may produce a radiation hazard, or

(ii) any alterations, renovations or damage to protective barriers or shielding that could affect radiation exposure to radiation workers or the general public in or around the controlled area;

(d) other times as determined and directed by the director; and

(e) within 24 months of the date that the last radiation protection survey was performed.

(2) Radiation protection surveys shall be performed and reports prepared by persons who, in the opinion of the director, have the education, knowledge, training and expertise required to perform radiation protection surveys.

(3) A radiation protection survey report in respect of radiation equipment used on humans or animals shall include the following:

(a) a sketch including

(i) the controlled area, which shows the location of the radiation equipment and the control booth or control panel within the controlled area, and

(ii) the uncontrolled areas immediately adjacent to the controlled area, which shows the nature of the use and occupancy of the uncontrolled areas;

(b) identification information for the radiation equipment, including

(i) the name of the manufacturer,

(ii) the model,

(iii) any serial numbers that are required to be displayed on the radiation equipment or a component of the radiation equipment under the *Radiation Emitting Devices Regulations* (Canada),

(iv) the installation date, and

(v) the operational date, except in the case of a radiation protection survey performed in accordance with paragraph (1)(a);

(c) a description of the operational condition of the electrical and mechanical components of the radiation equipment at the time of the radiation protection survey;

(d) the actual or estimated total workload of the radiation equipment as well as the workload apportioned into various x-ray beam directions and procedures used;

(e) the results of radiation measurements taken both inside and outside of the controlled area

under typical operating conditions;

(f) the locations at which the measurements referred to in paragraph (e) are taken;

(g) an estimate of potential radiation exposure to radiation workers, other personnel and the general public in or around the controlled area;

(h) an assessment of the condition of x-ray protective equipment including aprons, gloves, thyroid protectors, mobile protective barriers and other x-ray protective devices;

(i) an evaluation of the x-ray performance and the imaging or diagnostic performance which may include the performance of applicable quality control tests;

(j) a summary of typical loading factors used and a measurement of the total filtration in the x-ray beams;

(k) a summary of the results of inquiries made by or on behalf of an owner in relation to incidents where personal dosimetry records of a radiation worker report unusually high exposure;

(l) recommendations as to whether other persons should be included in a dosimetry monitoring program at the workplace;

(m) the methodology and test instruments used for the radiation protection survey; and

(n) corrective actions taken or required.

(4) Where a radiation protection survey is performed in accordance with paragraph (1)(b) or (c), the owner shall provide the radiation protection survey report to the director within 24 hours of receipt of the radiation protection survey report.

(5) Radiation protection surveys for radiation equipment that is not used on humans or animals shall be performed in accordance with

(a) the manufacturer's requirements;

(b) the applicable safety code; and

(c) directions provided by the director.

Warning signs

13. A controlled area that is equipped with stationary radiation equipment and that can be accessed from a public area shall be identified with warning signage that contains

(a) an x-ray warning symbol that meets the requirements in the *Radiation Emitting Devices Regulations* (Canada); and

(b) the words "Unauthorized Entry Prohibited".

Requirements for use of radiation equipment on humans

14. (1) Radiation equipment shall only be used for the irradiation of humans where the use

(a) has been authorized by a person referred to in subsection (2); and

(b) is for the following purposes:

(i) x-ray examination, or

(ii) radiation therapy.

(2) The following persons may authorize the use of radiation equipment for the irradiation of humans:

(a) a medical practitioner as defined in the *Medical Act, 2011*;

(b) a nurse practitioner as defined in the *Registered Nurses Act, 2008*;

(c) a practitioner as defined in the *Dental Act, 2008*;

(d) a dental hygienist as defined in the *Dental Hygienist Regulations* under the *Health Professions Act*; or

(e) a chiropractor as defined in the *Chiropractors Act, 2009*.

(3) A person referred to in subsection (2) shall not authorize the use of radiation equipment for the irradiation of a specific individual unless the person has determined, in accordance with the applicable safety code, that the irradiation is clinically justified.

(4) A determination under subsection (3) shall not be made unless

(a) the person has conducted a clinical evaluation of the individual; and

(b) in the case of an x-ray examination, the diagnostic information cannot otherwise be obtained.

Operation of radiation equipment on humans

15. (1) A person shall not operate radiation equipment for the irradiation of humans unless that person is

(a) a medical practitioner as defined in the *Medical Act, 2011*;

(b) a practitioner as defined in the *Dental Act, 2008*;

(c) a dental hygienist as defined in the *Dental Hygienist Regulations* under the *Health Professions Act*;

(d) a medical radiation technologist that is qualified to practice in the province;

(e) a graduate of a medical x-ray training program satisfactory to the director; or

(f) a chiropractor as defined in the *Chiropractors Act, 2009*.

(2) Notwithstanding subsection (1), a person in an education program who is training to be a person referred to in subsection (1) may operate radiation equipment for the irradiation of humans where the person

(a) is under the instruction and supervision of a person referred to in subsection (1); and

(b) has, in the education program, completed training in the operation of radiation equipment satisfactory to the director.

(3) Notwithstanding subsections (1) and (2), where the director is satisfied that an emergency exists and a person referred to in subsection (1) or (2) is not readily available, the director may authorize another person who has completed training satisfactory to the director to operate radiation equipment for the irradiation of humans in accordance with terms set by the director.

Requirements for use of radiation equipment on animals or inanimate objects

16. A person shall not authorize the use of or operate radiation equipment for the purpose of the

irradiation of animals or inanimate objects unless the person

(a) is licensed as a veterinarian under the *Veterinary Medical Act, 2004*;

(b) has completed training acceptable to the director;

(c) is certified by and in good standing with the Natural Resources Canada National Non-Destructive Testing Certification Body; or

(d) is acting under the direct supervision of a person referred to in paragraph (a), (b) or (c) and, in the opinion of the director, has the knowledge, experience and ability to operate the radiation equipment in a safe manner.

Mobile radiation equipment

17. (1) Mobile radiation equipment shall only be used on humans and animals where it is not practical to use stationary radiation equipment.

(2) Mobile radiation equipment shall be operated, maintained and inspected in accordance with the applicable safety code, the Act and these regulations.

(3) Mobile radiation equipment shall, where possible, be kept under the control and supervision of a person who is authorized to operate radiation equipment under these regulations.

(4) Where it is not possible to satisfy the requirement in subsection (3), mobile radiation equipment shall be

(a) stored in a secure space accessible only by a person referred to in subsection (3); or

(b) equipped with safety features that prevent the mobile radiation equipment from being operated by a person other than a person referred to in subsection (3).

Safety training

18. (1) Before a radiation worker uses radiation equipment, an owner shall provide the radiation worker with safety training that includes the following:

(a) the manufacturer's safe operation procedures for the radiation equipment;

(b) practices and procedures to minimize radiation exposure for radiation workers, including the use of appropriate x-ray protective equipment;

(c) practices and procedures to minimize radiation exposure for persons other than radiation workers;

(d) the health risks of radiation and possible sources of exposure;

(e) the maximum permissible doses of radiation;

(f) an overview of the relevant safety requirements set out in the Act and these regulations;

(g) procedures to follow in the event of an accident or overexposure;

(h) the responsibilities of owners and radiation workers as set out in the manufacturer's guidelines and the applicable safety code; and

(i) how to access additional safety information.

(2) The safety training referred to in subsection (1) shall include written safety instructions which shall be

(a) provided to radiation workers; and

(b) readily available and kept in a location close to the operating controls for the radiation equipment.

(3) A radiation worker who operates radiation equipment shall have access to and be familiar with the manufacturer's operator manual for the radiation equipment.

(4) Where a manufacturer recommends or provides user training in respect of radiation equipment, the training shall be

(a) in addition to the safety training required under subsection (1); and

(b) completed and documented before a radiation worker operates the radiation equipment.

(5) An owner shall ensure that the safety training required under subsection (1) is developed and implemented

(a) specifically for the owner's workplace and radiation equipment; and

(b) in consultation with the occupational health and safety committee or the worker health and safety representative.

(6) Radiation workers shall follow the practices and procedures contained in the safety training and instructions provided to them in accordance with this section.

(7) An owner shall ensure, through adequate supervision or evaluation, that the safety training and instructions have been understood and are being followed and applied by radiation workers.

Procedures respecting pregnant radiation workers

19. (1) An owner shall develop written policies and procedures to educate radiation workers on the hazards of radiation exposure during pregnancy and the necessary safety measures.

(2) Where a radiation worker becomes pregnant and advises the radiation worker's employer of the pregnancy, safety measures shall be implemented where necessary to ensure that

(a) the unborn child is protected from radiation exposure for the remainder of the pregnancy; and

(b) the radiation worker does not receive a dose of radiation on the surface of the radiation worker's abdomen greater than 4 millisieverts from all sources of radiation for the duration of the pregnancy.

Personal radiation monitoring

20. (1) An owner shall

(a) obtain dosimeters from a dosimetry service provider that is licensed by the Canadian Nuclear Safety Commission;

(b) provide dosimeters to all radiation workers employed by the owner;

(c) register all radiation workers employed by the owner with the dosimetry service provider that supplied the dosimeters and provide that dosimetry service provider with the following:

(i) the social insurance number for each radiation worker, and

(ii) any other information that may be required by the dosimetry service provider for the purpose of registering the radiation workers;

(d) ensure that radiation workers wear a dosimeter while

(i) performing any procedure using radiation, and

(ii) working in areas normally occupied by radiation workers or in the immediate proximity of areas where radiation equipment is being used;

(e) store dosimeters in accordance with the specifications provided by the dosimetry service provider that supplied the dosimeters;

(f) replace a radiation worker's dosimeter immediately where it is lost or damaged;

(g) following each reporting period, promptly submit the following to the dosimetry service provider that supplied the dosimeters:

(i) the dosimeters worn by all radiation workers employed by the owner,

(ii) the social insurance number for each radiation worker, and

(iii) any other information that may be required by the dosimetry service provider;

(h) ensure that, within 30 days of receipt of personal dosimetry records for each radiation worker referred to in paragraph (g), the following is provided to the National Dose Registry in a format required for the purpose of the National Dose Registry:

(i) the personal dosimetry record for each radiation worker,

(ii) the social insurance number for each radiation worker, and

(iii) any other information required for the purpose of the National Dose Registry; and

(i) where personal dosimetry records indicate that a radiation worker has been exposed to an unusually high dose of radiation,

(i) conduct inquiries to determine the cause of the overexposure, and

(ii) identify and implement corrective and preventative actions to prevent a future overexposure.

(2) A radiation worker

(a) shall

(i) wear and store a dosimeter in accordance with the specifications provided by the dosimetry service provider that supplied the dosimeter,

(ii) wear a different dosimeter at each worksite where the radiation worker works at more than one worksite, and

(iii) wear the same dosimeter assigned to the worker for a particular worksite for the entirety of a reporting period, except where the radiation worker's dosimeter is lost or damaged; and

(b) shall not share a dosimeter with another person.

(3) An owner shall

(a) review, manage and maintain personal dosimetry records for all radiation workers employed by the owner;

(b) inform a radiation worker of the radiation worker's personal dosimetry records for a reporting period on receipt of the personal dosimetry records from the dosimetry service provider;

(c) provide radiation workers with access to the radiation worker's personal dosimetry records and with copies of those records on request;

(d) provide a radiation worker with a copy of records containing the cumulative personal dosimetry records for the radiation worker's full period of employment, where the radiation worker ceases employment with the owner; and

(e) provide each radiation worker with a copy of records containing the cumulative personal dosimetry records for the radiation worker's full period of employment, where the owner ceases operations.

Safety measures for operating radiation equipment

21. (1) Where a radiation worker is operating radiation equipment, the radiation worker shall

(a) where possible, remain inside a control booth or behind a protective barrier while exposed to ionizing radiation; and

(b) where it is not possible to remain inside a control booth or behind a protective barrier while exposed to ionizing radiation, use appropriate x-ray personal protective equipment to protect against exposure to ionizing radiation.

(2) An owner shall provide radiation workers with x-ray personal protective equipment that

(a) provides protection

(i) to the parts of the radiation worker's body that are exposed to ionizing radiation, and

(ii) that is appropriate for the position of the radiation worker while in the proximity of radiation equipment during use; and

(b) has the lead equivalence required under the applicable safety code.

(3) X-ray personal protective equipment shall be

(a) readily available and used where necessary to keep radiation exposure as low as reasonably achievable;

(b) properly stored in accordance with manufacturer’s storage guidelines;

(c) labelled, permanently and legibly, to show the lead equivalence of the equipment;

(d) cleaned and maintained in accordance with manufacturer’s guidelines and any applicable infection prevention and control guidelines; and

(e) properly maintained and subjected to physical and radioscopic inspection at least annually.

(4) Records containing the details of maintenance and inspection of x-ray personal protective equipment shall be maintained by an owner and available for review upon request.

(5) The records referred to in subsection (4) shall identify

(a) all individual items of x-ray personal protective equipment;

(b) the maintenance and inspection activities performed; and

(c) the date that each item was

(i) first used, and

(ii) last used, where an item has been taken out of service.

Monitoring exposure, incident reporting and procedures

22. (1) An owner shall notify the director in accordance with this section where one or more of the following occurs:

(a) an incident referred to in paragraph 11(1)(j) of the Act;

(b) an incident involving operation of radiation equipment in contravention of the applicable safety code or manufacturer's guidelines that could reasonably have a serious negative impact on the health of an individual; or

(c) a person is exposed to radiation in excess of $1/20^{th}$ of the maximum permissible dose of radiation.

(2) A notice referred to in subsection (1) shall

(a) be in writing;

(b) be provided to the director within 3 days of the owner becoming aware of the incident; and

(c) include

(i) the date and location of the incident,

(ii) the names and contact information for the persons involved or affected, and

(iii) the following identification information for the radiation equipment that was involved in the incident:

(A) the name of the manufacturer,

(B) the model,

(C) any serial numbers that are required to be displayed on the radiation equipment or a component of the radiation equipment under the *Radiation Emitting Devices Regulations* (Canada)**,**

(D) the installation date, and

(E) the operational date.

(3) Where an incident referred to in subsection (1) occurs, the owner shall make the necessary inquiries to ascertain details relating to the incident and shall

(a) interview all persons involved in the incident;

(b) determine the sequence of events and the details regarding the exposure of radiation workers or other persons;

(c) identify the cause of the incident;

(d) assess the dose of radiation received by persons who may have been affected;

(e) review all records associated with the incident including

(i) personal dosimetry records of persons involved,

(ii) maintenance records for the radiation equipment that was involved in the incident,

(iii) training records for the persons involved in the incident, and

(iv) radiation protection surveys;

(f) identify and implement corrective and preventative actions to prevent a reoccurrence of the incident; and

(g) keep written records of the results of inquiries made and actions taken under this subsection.

(4) Any costs incurred by an owner in complying with this section shall be the responsibility of the owner.

(5) Where the director receives a notice in accordance with this section, the director may require that a third party investigate the incident.

Change in location

23. Where an owner relocates stationary radiation equipment to a different radiation facility for use in that radiation facility, the owner shall notify the director in writing of the relocation and provide the following information:

(a) the new location of the radiation equipment; and

(b) the date that the radiation equipment was relocated.

Removal from service

24. (1) Where radiation equipment is removed from service the owner shall

(a) notify the director in writing that the radiation equipment has been removed from service; and

(b) return the certificate of registration for the radiation equipment to the director.

(2) Upon receipt of a certificate of registration under subsection (1), the director shall revoke the registration of the radiation equipment.

(3) Where an owner removes radiation equipment from service, the owner

(a) shall not use the radiation equipment again unless the owner registers the radiation equipment in accordance with the Act and these regulations; and

(b) shall either

(i) store the radiation equipment in a secure manner accessible only by the owner or other persons authorized by the owner, or

(ii) dispose of the radiation equipment in accordance with section 25.

(4) For the purposes of this section, radiation equipment shall be considered to be removed from service where

(a) the owner indicates that the radiation equipment has been removed from service; or

(b) the owner

(i) fails to register the radiation equipment in accordance with the Act and these regulations,

(ii) ceases to maintain the radiation equipment in accordance with the Act and these regulations, or

(iii) ceases to perform radiation protection surveys as required in the Act and these regulations.

Disposal of radiation equipment

25. (1) Where radiation equipment is being disposed of, an owner shall ensure that the radiation equipment is both rendered inoperable and disposed of in accordance with

(a) the manufacturer's guidelines; and

(b) the applicable safety code.

(2) Where the manufacturer's guidelines or an applicable safety code do not provide disposal guidelines with respect to the matters referred to in subsection (1), the owner shall comply with the disposal guidelines in the safety code referred to in paragraph 3(1)(g).

Records and retention periods

26. An owner shall create and retain the following records for the periods of time indicated:

(a) records related to ownership of radiation equipment, including the date of acquisition and, where applicable, the date of a transfer of ownership and details related to the new owner, which shall be retained for the duration of ownership of the radiation equipment plus 5 years;

(b) records related to disposal of radiation equipment, including the date and location of disposal and details of measures taken in accordance with section 25, which shall be retained for 5 years from the date of disposal;

(c) copies of applications and other documentation submitted for the initial registration and registration renewals for radiation equipment which shall be retained for 5 years from the date of the application;

(d) records of the installation date, operational date and location of use for radiation equipment which shall be retained for the duration of ownership of the radiation equipment plus 5 years;

(e) copies of the documentation provided to the director under paragraph 11(1)(a) which shall be retained for the duration of the installation of the radiation equipment at the radiation facility plus 5 years;

(f) copies of acceptance testing reports in respect of radiation equipment which shall be retained for the duration of the installation of the radiation equipment at the radiation facility plus 5 years;

(g) copies of lead shielding integrity assessments which shall be retained for the duration of the installation of the radiation equipment at the radiation facility plus 5 years;

(h) records containing details of any structural changes to controlled areas which shall be retained for the duration of the installation of the radiation equipment at the radiation facility plus 5 years;

(i) records of all servicing, maintenance and repairs performed on radiation equipment which shall be retained for the duration of ownership of the radiation equipment plus 5 years;

(j) copies of service bulletins issued by a manufacturer of radiation equipment to an owner relating to the owner's radiation equipment which shall be retained for the duration of the installation of the radiation equipment at the radiation facility plus 5 years;

(k) copies of radiation protection survey reports which shall be retained for the duration of ownership of the radiation equipment that is the subject of the radiation protection survey report plus 5 years;

(l) records of accidents and overexposures involving radiation equipment which shall be retained for the period of employment of all employees involved in the accident or overexposure plus 10 years or for the time period set out in the applicable safety code, whichever is longer;

(m) personal dosimetry records for a radiation worker which shall be retained for the period of employment of the radiation worker plus 10 years or for the time period set out in the applicable safety code, whichever is longer;

(n) employment records for radiation workers, including the nature of services provided and the location, duties and period of employment which shall be retained for the period of employment of the radiation worker plus 10 years or for the time period set out in the applicable safety code, whichever is longer;

(o) records of training and safety training of a radiation worker which shall be retained for the period of employment of the radiation worker plus 2 years; and

(p) records of maintenance and inspection of x-ray personal protective equipment required under subsection 21(4) which shall be retained for the period of time that the x-ray personal protective equipment is in use plus 5 years.

Repeal

27. The *Radiation Health and Safety Regulations*, Consolidated Newfoundland and Labrador Regulation 1154/96, are repealed.

Commencement

28. These regulations come into force on the date the Act comes into force.