

TITLE 32: ENERGY  
CHAPTER II: ILLINOIS EMERGENCY MANAGEMENT AGENCY  
SUBCHAPTER b: RADIATION PROTECTION

PART 320  
REGISTRATION AND OPERATOR REQUIREMENTS  
FOR RADIATION INSTALLATIONS

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**AUTHORITY:** Implementing and authorized by Sections 24.7, 25 and 25.1 of the Radiation Protection Act of 1990 [420 ILCS 40/24.7, 25 and 25.1].

**SOURCE:** Filed April 20, 1974 by the Department of Public Health; transferred to the Department of Nuclear Safety by P.A. 81-1516, effective December 3, 1980; codified at 7 Ill. Reg. 11278; amended at 10 Ill. Reg. 17529, effective September 25, 1986; amended at 14 Ill. Reg. 13644, effective August 13, 1990; amended at 18 Ill. Reg. 3363, effective February 22, 1994; amended at 20 Ill. Reg. 6912, effective May 1, 1996; amended at 23 Ill. Reg. 14488, effective January 1, 2000; amended at 27 Ill. Reg. 3465, effective February 17, 2003; recodified from the Department of Nuclear Safety to the Illinois Emergency Management Agency at 27 Ill. Reg. 13641; amended at 36 Ill. Reg. 17376, effective November 30, 2012.

**Section 320.10 Registration**

- a) For purposes of registration pursuant to this Part, the phrase "radiation installation" shall mean any location or facility where radiation machines are located.
- b) Installation Registration
  - 1) Any operator of a radiation installation shall register that radiation installation with the Illinois Emergency Management Agency (Agency). The operator shall register the installation, before the installation is placed in operation, on a form prescribed by the Agency that shall include:

- A) The operator's name;
  - B) The location and confines of the radiation installation; and
  - C) The type, manufacturer, model, serial number and room location of radiation machines possessed.
- 2) Radiation machines that are located in a single building or in a group of buildings that are contiguous to one another, and used by the same operator, shall be treated as a single radiation installation unless requested otherwise in writing by the operator and approved by the Agency.
- c) Installation Classifications  
Radiation installations shall be divided into the following 4 classes:
- 1) Class A – Class A shall include dental offices and veterinary offices with radiation machines used solely for diagnosis, all installations using commercially manufactured cabinet radiographic/fluoroscopic radiation machines with interlocked doors and shielded sufficiently to meet the requirements of 32 Ill. Adm. Code 340.310(a) and radiation machines used as gauges.
  - 2) Class B – Class B shall include offices or clinics of persons licensed under the Medical Practice Act of 1987 [225 ILCS 60] or the Podiatric Medical Practice Act of 1987 [225 ILCS 100] with radiation machines used solely for diagnosis and all installations using spectroscopy radiation machines, noncommercially manufactured cabinet radiographic/fluoroscopic radiation machines, portable radiographic/fluoroscopic units, diffraction radiation machines, non-cabinet baggage/package fluoroscopic radiation machines and electronic beam welders. Test booths, bays or rooms used by manufacturing, assembly or repair facilities for testing radiation machines shall be categorized as Class B radiation installations.
  - 3) Class C – Class C shall include installations using open radiography radiation machines and closed radiographic/fluoroscopic radiation machines.
  - 4) Class D – Class D shall include all hospitals and other facilities using mammography, computed tomography (CT), or therapeutic radiation machines.
  - 5) Radiation installations for which more than one class is applicable shall be assigned a classification based on the radiation machines' use and

associated radiation hazard.

d) Machine Registration

- 1) Every operator of a radiation installation shall register radiation machines annually on a form prescribed by the Agency.
- 2) An annual registration fee for each machine possessed on January 1 of each year shall be submitted with the registration form. This fee, based on the type of facility and radiation machines possessed, is listed in this subsection (d)(2) as follows:

Facility Type	Fee Per Radiation Machine
Class A – Dental and veterinary offices.	\$50
Class A – X-ray gauges and installations only using commercially manufactured cabinet radiation machines with interlocked doors and shielded sufficiently to meet the requirements of 32 Ill. Adm. Code 340.310(a).	\$75
Class B – Offices or clinics of persons licensed under the Medical Practice Act, and all installations using portable radiographic/fluoroscopic units.	\$175
Class B – Podiatric offices.	\$100
Class B – All installations using spectroscopy, non-commercially manufactured cabinet units, non-cabinet baggage/package units, diffraction radiation machines and/or electron beam welders. Also, installations with test booths, bays or rooms used by manufacturing, assembly or repair	\$175

facilities for testing radiation machines.

Class C – Installations using open or closed radiography machines. \$250

Class D – All hospitals and other facilities using mammography, computed tomography (CT), or therapeutic radiation machines. \$100

3) *The Agency shall bill the operator for the registration fee as soon as practical after January 1. The registration fee shall be due and payable within 60 days after the date of billing. If after 60 days the registration fee is not paid, the Agency may issue an order directing the operator of the installation to cease use of all radiation machines or take other appropriate enforcement action as provided in Section 36 of the Act. Fees collected under this Section are not refundable. [420 ILCS 40/24.7]*

- e) All radiation installations are subject to inspection at all times. The frequency of inspections is based on the associated radiation hazards located at the installation. Class A installations should expect to be inspected approximately once every 5 years. Class B should expect to be inspected approximately once every 2 years. Class C and D installations should expect to be inspected approximately once annually.

(Source: Amended at 36 Ill. Reg. 17376, effective November 30, 2012)

### **Section 320.15 Incorporations by Reference (Repealed)**

(Source: Repealed at 23 Ill. Reg. 14488, effective January 1, 2000)

### **Section 320.20 Amendments and Changes in Status**

- a) Operators of radiation installations that have been registered pursuant to Section 320.10 shall notify the Agency within 30 days after the installation of any new, used or relocated radiation machines, or the reactivation of any radiation machines.
- b) If any operator discontinues using radiation machines, the operator shall notify the Agency within 30 days after the discontinuance. The notification shall include

the date of discontinuance and the disposition of the radiation machines.

- c) Within 30 days after changing the operator of a radiation installation, the new operator shall notify the Agency.

(Source: Amended at 36 Ill. Reg. 17376, effective November 30, 2012)

### **Section 320.30 Discontinued Use (Repealed)**

(Source: Repealed at 23 Ill. Reg. 14488, effective January 1, 2000)

### **Section 320.40 Exemptions**

An operator shall be exempt from the installation and machine registration requirements of this Part for the following:

- a) Electrical equipment that is manufactured for purposes other than generation of radiation, where the generation of radiation is incidental to operation (such as a television or electron microscope).
- b) Radiation machines while in transit or storage incident to transit.

(Source: Amended at 23 Ill. Reg. 14488, effective January 1, 2000)

### **Section 320.50 Noncompliance (Repealed)**

(Source: Repealed at 23 Ill. Reg. 14488, effective January 1, 2000)

### **Section 320.60 Requirements for All Operators of Radiation Installations**

Operators of radiation installations shall:

- a) Assure that all radiation machines are maintained and operated in accordance with standards established by the Agency to protect the public health and safety as set forth in this Part and in 32 Ill. Adm. Code 310, 340, 350, 360, 370, 380, 390, 400, 401, 405 and 410.
- b) Assure that all persons who use a radiation machine to administer ionizing radiation to human beings are licensed in accordance with the requirements of 32 Ill. Adm. Code 360.10, accredited by the Agency or exempt from those requirements in accordance with 32 Ill. Adm. Code 401.30.

(Source: Amended at 36 Ill. Reg. 17376, effective November 30, 2012)

**Section 320.70 Additional Requirements for Operators of Class D Radiation Installations**

- a) Each operator of a Class D radiation installation shall utilize the services of an individual, registered with the Agency pursuant to 32 Ill. Adm. Code 410, to implement and maintain a comprehensive radiation protection program. Activities related to diagnostic radiation producing machines shall be performed by a registered diagnostic imaging specialist. Activities related to therapeutic radiation machines shall be performed by a registered therapeutic radiological physicist. Each operator shall ensure that registered individuals:
  - 1) Conduct an annual performance evaluation of all radiation machines.
  - 2) Determine and document in a report to the facility that the radiation machines evaluated are being maintained and operated in accordance with standards established by the Agency to protect the public health as set forth in 32 Ill. Adm. Code: Chapter II, Subchapters b and d. Noncompliance items shall be readily identified in the report.
  - 3) Establish and oversee the equipment-related quality assurance practices. Specifically, these quality assurance practices shall include as a minimum:
    - A) For therapeutic radiation machines, compliance with the quality assurance requirements specified in 32 Ill. Adm. Code 360.110(d) or 360.120(e).
    - B) For computed tomography machines, compliance with the quality assurance requirements specified in 32 Ill. Adm. Code 360.75.
    - C) For mammography machines, compliance with the quality assurance requirements specified in 32 Ill. Adm. Code 370.100.
  - 4) Establish and oversee a quality assurance program for the film processors. The program shall include specifications for processor cleaning and maintenance and procedures to ensure the processor is optimized and properly maintained.

AGENCY NOTE: The Agency recommends daily sensitometry and densitometry evaluation for processors used in facilities with heavy workloads. However, the diagnostic imaging specialist or therapeutic radiological physicist is the individual best qualified to determine the appropriate quality assurance program for each processor, based on its workload and conditions of use.

- 5) Users of digital imaging acquisition systems shall follow a quality assurance/quality control protocol for image processing established by the manufacturer and:
  - A) The registrant shall include the protocol in its operating and safety procedures.
  - B) The registrant shall document the frequency at which the quality assurance/quality control protocol is performed. Documentation shall include the date and initials of the individual completing the document and shall be maintained at the site where performed for inspection by the Agency.
  - C) The protocol shall include but not be limited to the following:
    - i) Cleaning and erasure of all imaging plates;
    - ii) Quality control phantom analysis;
    - iii) Evaluation of repeat/retake x-ray examinations;
    - iv) Review of dose index values.
- b) Each operator of a Class D radiation installation shall maintain and have available for review by the Agency:
  - 1) Accurate and thorough radiation machine evaluation reports.
  - 2) Records of quality assurance testing performed.
  - 3) Records of calibrations, maintenance or repair.
  - 4) Records of corrective action taken for items of non-compliance.
  - 5) Records of film processor cleaning and maintenance.
  - 6) Records of digital imaging quality control.
- c) The records and reports required by this Section shall be maintained for a period of at least one inspection cycle.

(Source: Amended at 36 Ill. Reg. 17376, effective November 30, 2012)