

**TITLE 20 ENVIRONMENTAL PROTECTION**  
**CHAPTER 3 RADIATION PROTECTION**  
**PART 2 REGISTRATION OF RADIATION MACHINES AND SERVICES**

**20.3.2.1 ISSUING AGENCY:** Environmental Improvement Board.  
[5/3/95; Recompiled 11/27/01]

**20.3.2.2 SCOPE:** This ~~subpart~~ Part ~~[now 20.3.2 NMAC]~~ provides for the registration of~~[-]~~  
~~[A.] ionizing radiation machine[s] facilities, persons providing radiation machine installation,~~  
~~servicing, services and healthcare professionals. [-; and]~~  
~~[B.] persons providing radiation machine installation, servicing, or services as stipulated in Section~~  
~~204.]~~  
~~[C.]~~ In addition to the requirements of this ~~subpart [now part]~~ Part, all registrants are subject to the  
applicable provisions of ~~[other subparts of these regulations]~~ 20.3.1 NMAC, 20.3.4 NMAC, and 20.3.10 NMAC. In  
addition, some registrants that are licensees are subject to provisions of 20.3.5 NMAC, 20.3.6 NMAC, 20.3.8  
NMAC, and 20.3.9 NMAC.  
[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.3 STATUTORY AUTHORITY:** Sections 74-1-9, 74-3-5 and 74-3-9 NMSA 1978.  
[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.4 DURATION:** Permanent.  
[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.5 EFFECTIVE DATE:** Effective ~~[May 3, 1995]~~ \_\_\_\_\_, 2026, unless a later date is cited at  
the end of a section or paragraph. ~~[-, this part, less Subpart 14 [now 20.3.14 NMAC], superseded EIB RPR 1,~~  
~~Radiation Protection Regulations, filed March 10, 1989. Any reference to EIB RPR 1 on any other regulations shall~~  
~~be construed to mean these regulations. Effective July 30, 1999, this part has been internally renumbered and history~~  
~~notes have been added for inclusion into the New Mexico Administrative Code.~~  
~~\_\_\_\_\_ A. \_\_\_\_\_ Subpart 14 [now 20.3.14 NMAC] is effective August 2, 1995.~~  
~~\_\_\_\_\_ B. \_\_\_\_\_ Supersession of EIB RPR 1 shall not affect any administrative or judicial enforcement action~~  
~~pending on the effective date of these regulations, nor the validity of any license issued pursuant to EIB RPR 1.]~~  
~~[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]~~  
~~[Compiler's note: The words *or paragraph*, above, are no longer applicable. Later dates are now cited only at the~~  
~~end of sections, in the history notes appearing in brackets.]~~

**20.3.2.6 OBJECTIVE:**  
**A.** To protect the public and occupationally exposed individuals from unnecessary exposure to  
ionizing radiation.  
**B.** To provide for the safe possession and use of radioactive materials and radiation machines in  
keeping with the ALARA principle.  
[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.7 DEFINITIONS:** ~~[RESERVED]~~  
**A.** "Facility" means the location, building, vehicle, or complex under one administrative control at  
which one or more radiation machines are installed, located, or used.  
**B.** "Storage" means a condition in which a device or source is not being used for an extended period  
and has been made inoperable.  
[20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.8 - 20.3.2.199 [RESERVED]**

**20.3.200 PROHIBITION:** All registrants shall prohibit any person from providing radiation machine  
servicing or services as described in Subsection D of 20.3.2.204 NMAC; to their radiation machine facility until  
such person provides evidence of registration with the Department as a provider of services in accordance with  
20.3.2.204 NMAC

**20.3.2.8 - 20.3.2.~~200~~199 [RESERVED]**

**20.3.2.201 EXEMPTIONS:**

**A.** Electronic equipment that produces radiation incidental to its operation for other purposes is exempt from the registration and notification requirements of this ~~[subpart [now part]]~~ Part, provided that the dose equivalent rate averaged over an area of 10 sq. cm does not exceed 0.5 mrem (5  $\mu$ Sv) per hour at 5 cm from an accessible surface of such equipment. The production, testing or factory servicing of such equipment shall not be exempt.

**B.** Radiation machines while in transit or storage incident thereto are exempt from the requirements of this ~~[subpart [now part]]~~ Part.

**C.** Domestic television receivers are exempt from the requirements of this subpart ~~[subpart [now part]]~~ Part.

**D.** Microwave ovens in private homes are exempt from the requirements of this ~~[subpart [now part]]~~ Part.

**20.3.2.202 APPLICATION FOR REGISTRATION OF RADIATION MACHINES:**

**A.** Each person having a radiation machine shall:

**(1).** apply for registration of such ~~[machine]~~ facility with the department ~~[within 30 days following the effective date of these regulations or thereafter]~~ prior to the operation of a radiation machine on forms furnished by the department and shall contain all the information required by the form and accompanying instructions; and

**(2).** designate on the application form an individual to be responsible for radiation protection.

**B.** A practitioner, licensed by the respective state board of examiners (i.e. state medical board, state dental board, state chiropractic board, state podiatric board), responsible for directing the operation of radiation machines shall be designated on each healing arts application. The signature of the administrator, president, or chief executive officer will be accepted in lieu of a licensed practitioner's signature if the facility has more than one licensed practitioner (for example, hospitals, large clinics, or multi-practitioner practices).

**C.** Mobile facilities with radiation producing machines shall maintain documentation required by this Part on site.

**20.3.2.203** ~~[PROHIBITED SERVICING OF RADIATION MACHINES: Each registrant shall prohibit any person from furnishing radiation machine servicing or services as described in Section 204.D [now Subsection D of 20.3.2.204 NMAC] to their radiation machine facility until the person provides evidence that they have been registered with the department as a provider of services in accordance with Section 204.]~~

**SHIELDING PLAN REVIEW:**

**A.** Before construction, the department may require the submittal of the floor plans, shielding specifications, and equipment arrangement of all new installations or modifications of existing installations utilizing ionizing radiation machines for review and approval. The required information is in Appendices A and B of this Part.

**B.** The department may require the applicant to utilize the services of a qualified health physicist or a qualified medical physicist to determine the shielding requirements before the department's plan review and approval.

**C.** The department's approval of such plans shall not preclude the requirement of additional modifications should a subsequent analysis of operating conditions indicate the possibility of an individual receiving a dose above the limits prescribed in Part 4 of 20.3.4.405, and 20.3.4.410 thru 20.3.4.414 NMAC, of these regulations.

**D.** After installation of a radiation machine, the registrant shall maintain the following for inspection by the department:

**(1)** The maximum rated technique factors of each machine; and

(2) A scale drawing of the room in which a stationary radiation machine system is located with such drawing indicating the use of areas adjacent to the room and an estimation of the extent of occupancy by an individual in such areas. In addition, the drawing shall include:

(a) The results of a survey for radiation levels present at the operator's position and at pertinent points outside the room at specified test conditions; or

(b) The type and thickness of materials, or lead equivalency, of each protective barrier.

[[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

#### **20.3.2.204 APPLICATION FOR REGISTRATION OF SERVICING AND SERVICES:**

A. Each person who is engaged in the business of installing or offering to install radiation machines or is engaged in the business of furnishing or offering to furnish radiation machine servicing or radiation safety related services in this state, shall apply for registration of such services with the department prior to furnishing or offering to furnish any such services.

B. Application for registration shall be completed on a form furnished by the department and shall contain all information required by the department as indicated on the forms and accompanying instructions.

C. Each person applying for registration under this ~~subpart~~ ~~now part~~ Part shall specify:

- (1) that they have read and understand the requirements of these regulations; ~~and~~
- (2) the services for which they are applying for registration; and
- (3) the training and experience that qualifies them to discharge the services for which they are applying for registration.

D. For the purpose of this Section [204], services may include, but shall not be limited to:

- (1) installation or servicing of radiation machines and associated radiation machine components;
- (2) calibration of radiation machines or radiation measurement instruments or devices;
- (3) radiation protection or health physics consultations or surveys; and
- (4) personnel dosimetry services.

E. Personnel dosimetry services shall obligate themselves to report to the department all exposures greater than 400 millirems (4000  $\mu$ Sv) in any one month within 10 days of the determination.

F. No individual shall perform services which are not specifically indicated by that individual on his application for registration.

[[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

#### **20.3.2.205 ISSUANCE OF REGISTRATION CERTIFICATES:**

A. Upon a determination that an applicant meets the requirements of these regulations, the department shall issue a registration certificate.

B. The department may incorporate in the registration certificate at the time of issuance or thereafter by appropriate rule or order, such additional requirements and conditions with respect to the registrant's receipt, possession, use and transfer of radiation machines as it deems appropriate or necessary to protect the health of the people of this state.

[[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.206 EXPIRATION OF REGISTRATION CERTIFICATES:** Except as provided by Section 207, of this Part each registration certificate shall expire at the end of the day on the date stated therein.

[5/3/95; Recompiled 11/27/01]

#### **20.3.2.207 RENEWAL OF NOTICE OF REGISTRATION:**

A. Application for renewal of registration shall be filed at least 30 calendar days before the current certificate expires and in accordance with Sections 202 or 204 of this Part.

B. ~~[In any case in which a registrant not less than 30 days prior to the expiration of [his] their existing registration certificate has filed an application in proper form for renewal, such existing registration certificate shall not expire until the application status has been finally determined by the department.]~~ Registrations expire the following business day after the date noted on the registration.

[[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.208 REPORT OF CHANGES:** The registrant shall notify the department, in writing, before making any change which would render the information contained in the application for registration or the registration certificate no longer accurate.

~~[[5/3/95; Recompiled 11/27/01]~~ 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.209 APPROVAL NOT IMPLIED:** No person, in any advertisement, shall refer to the fact that they or their facility is registered with the department pursuant to the provisions of Sections 202 or 204 of this Part and no person shall state or imply that any activity under such registration has been approved by the department.

~~[[5/3/95; Recompiled 11/27/01]~~ 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.210 ASSEMBLER OR TRANSFER OBLIGATION:**

**A.** Any person who sells, leases, transfers, lends, disposes, assembles or installs radiation machines in this state shall notify the department within 15 calendar days of:

- (1) the name and address of persons who have received these machines;
- (2) the manufacturer, model and serial number of each radiation machine transferred; and
- (3) the date of transfer of each radiation machine.

**B.** No person shall make, sell, lease, transfer, lend, assemble or install radiation machines or the supplies used in connection with such machines unless such supplies and equipment, when properly placed in operation and used, shall meet the requirements of these regulations.

~~[[5/3/95; Recompiled 11/27/01]~~ 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.211 OUT-OF-STATE RADIATION MACHINES:**

**A.** Whenever any radiation machine is to be brought into the state, for any temporary use, the person proposing to bring such machine into the state shall give written notice to the department at least two working days before such machine is to be used in the state. The notice shall include: ~~[the type of radiation machines; the nature, duration and scope of use; and the exact location(s) where the radiation machine is to be used. If for a specific case, the two working day period would impose an undue hardship on the person, they may, upon application to the department, obtain permission to proceed sooner.]~~

- (1) the type of radiation machines
- (2) the nature, duration, and scope of use;
- (3) the exact location(s) where the radiation, machine is to be used; and
- (4) the State in which this machine is registered.

**B.** In addition, the out-of-state person shall:

- (1) comply with all applicable regulations;
- (2) supply the department with such other information as the department may reasonably request; and
- (3) not operate within this state on a temporary basis, in excess of 180 calendar days per year.

~~[[5/3/95; Recompiled 11/27/01]~~ 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.212 QUALIFICATION OF HEALTH PHYSICISTS AND MEDICAL PHYSICISTS FOR REGISTRATION:**

**A.** All persons registered or licensed to provide health physics services shall be:

- (1) certified by the American Board of Health Physics in the appropriate fields or specialties in which services are provided; or
- (2) hold a masters or doctorate degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university; and
- (3) have forty (40) hours practical training and/or supervised experience in x-ray physics.

**B.** All persons registered or licensed to provide medical physics services shall be certified by at least one of the following organizations in the appropriate fields or specialties in which services are provided:

- (1) the American Board of Medical Physics;
- (2) the American Board of Radiology;
- (3) the American Board of Science in Nuclear Medicine; or
- (4) similar board accredited by the Commission on Accreditation of Medical Physics

Education Programs.

C. Medical physicists for mammography shall meet the requirements specified by the Mammography Quality Standards Act of 1992, Public Law 102-539, 42 U.S.C. 263b, and 21 C.F.R. Part 900.

D. Medical physicists involved with facilities using radioactive materials on humans shall meet the requirements of Part 7 of 20.3 NMAC for registration or licensure.

E. All surveys, audits, reports, or other work performed by a health physicist or medical physicist as required by 20.3 NMAC shall be reviewed and signed by a health physicist or medical physicist holding registration or licensure specified by this Part.

[NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.213 APPENDIX A. INFORMATION ON RADIATION SHIELDING REQUIRED FOR PLAN REVIEWS:**

A. In order for the department to provide evaluation, technical advice and official approval on shielding requirements for a radiation installation, the following information is needed:

(1) normal location of the radiation producing equipment's radiation port; port's travel and traverse limits; general direction(s) of the radiation beam; locations of all windows; locations of the operator's booth; location of the equipment's control console; distance from x-ray tube to nearest primary barrier;

(2) structural composition and thickness of all walls, doors, partitions, floor(s) and ceiling(s) of room(s) concerned;

(3) height, floor-to-floor, of room(s) concerned;

(4) type of occupancy of all adjacent areas, inclusive of space above and below the room(s) concerned; for exterior walls, distance to the closest existing occupied area(s);

(5) kVp (kilovolt peak potential) and maximum mA (milliamperage) for each radiation machine; and

(6) type of examination(s) or treatment(s) performed with equipment (e.g., dental, orthodontal, chest, gastrointestinal, fluoroscopic, podiatry, fixed therapy, rotational therapy, etc.).

B. Information on anticipated workload used in shielding calculations must be provided. This must include exposures per week and average duration of each exposure for each radiation machine number.

C. If services of a qualified radiation expert have been utilized, a copy of his report shall be submitted with plans. This report must show all basic assumptions (i.e., workload, occupancy and use factors, distance, etc.) used to determine the shielding requirements.

[5/3/95; Recompiled 11/27/01] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

**20.3.2.214 APPENDIX B: MINIMUM DESIGN REQUIREMENTS FOR AN X-RAY MACHINE OPERATOR'S BOOTH:**

A. Space requirements:

(1) The operator shall be allotted not less than 0.7 square m (7.5 square feet) of unobstructed floor space in the booth;

(2) The minimum space as indicated in Paragraph (1) of Subsection (A) of this Section may be any geometric configuration with no dimension of less than 61 cm (2 feet);

(3) The space shall be allotted excluding any encumbrance by the console, such as overhang or cables, or other similar encroachments;

(4) The booth shall be located or constructed such that unattenuated direct scatter radiation originating on the examination table or at the wall cassette not reach the operator's station in the booth;

(5) The booth walls shall be at least 2.1 m (7 feet) high, and shall be permanently fixed to the floor or other structure as may be necessary; and

(6) When a door or movable panel is used as an integral part of the booth structure, it must have a permissive device which will prevent an exposure when the door or panel is not closed (this type of booth structure is not recommended).

B. Switch placement:

(1) The operator's switch for the radiographic machine shall be fixed within the booth;

(2) The switch shall be at least 1 m (40 inches) from any edge of the booth wall which is proximal to the examining table; and

(3) The switch shall allow the operator to use the majority of the available viewing windows.

C. Viewing system requirements:

(1) Each booth shall have at least one viewing device which will:

(a) be placed so the operator can view the patient during any exposure; and

(b) be placed so the operator can have full view of any occupant of the room and should be placed so the operator can view any entry into the room and if any door, which allows access to the room cannot be seen from the booth, then that door must have a permissive device controlling the exposure which will prevent the exposure if the door is not closed.

(2) When the viewing system is a window:

(a) it shall have a visible area of at least 930 square cm (1.5 square feet);

(b) the distance between the proximal edge of the window and the open edge of the booth shall not be less than 45.7 cm (18 inches); and

(c) the glass shall have the same lead equivalence as that required in the booths' wall in which it is to be mounted.

(3) When the viewing system is by mirrors, the mirror(s) shall be so located as to accomplish the general requirements Paragraph C of this Section

(4) When the viewing system is by electronic means (e.g., TV, etc.):

(a) the camera shall be so located as to accomplish the general requirements of Paragraph C of this Section; and

(b) there shall be an alternative viewing system as a backup for electronic failure.

[~~5/3/95; Recompiled 11/27/01~~] 20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

### **20.3.2.215 APPENDIX C. RADIATION SAFETY OFFICER (RSO) REQUIREMENTS**

**A.** All RSOs shall meet the following general requirements in addition to requirements in specific categories, except for industrial radiography RSOs:

(1) Knowledge of potential radiation hazards and emergency precautions; and

(2) Completed educational courses related to ionizing radiation safety or a radiation safety officer course; or

(3) Experience in the use and familiarity of the type of equipment used.

**B.** Specific requirements for RSOs by facility are as follows.

(1) Healing arts facilities shall have:

(a) Licensed practitioner RSOs with documentation of licensing board number; or

(b) Non-practitioner RSOs with the following:

(i) Evidence of a state license in medical radiologic technology and at least two years of supervised use of radiation machines; or

(ii) Evidence of registry by the American Registry of Radiologic Technologists (ARRT) and at least two years of supervised use of radiation machines; or

(iii) Evidence of associate degree in radiologic technology, health physics, or nuclear technology, and at least two years of supervised use of radiation machines; or

(iv) Evidence of:

(1) At least four years of supervised use of radiation machines in the respective practitioners' specialty; or

(2) A bachelor's (or higher) degree in a natural or physical science, health physics, radiological science, nuclear medicine, or nuclear engineering; or

(3) A current state license in medical physics or board certification in health or medical physics and in accordance with 20.3.2.212 NMAC, as applicable, for radiotherapy facilities.

(2) Academic institutions and/or research and development facilities shall have RSOs who are faculty or staff members in radiation protection, radiation engineering, or related disciplines. (This individual may also serve as the RSO over the healing arts section of the facility.)

[20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

### **20.3.2.216 APPENDIX D. RESPONSIBILITIES OF RADIATION SAFETY OFFICERS (RSO):**

Specific duties of the RSO include, but are not limited to, the following:

**A.** Establishing and overseeing operating and safety procedures that maintain radiation exposures as low as reasonably achievable (ALARA), and to review them regularly to ensure that the procedures are current and conform with this chapter;

**B.** Ensuring that individual monitoring devices are properly used by occupationally-exposed personnel, that records are kept of the monitoring results, and that timely notifications are made as required by Part 4;

C. Investigating and reporting to the Department each known or suspected case of radiation exposure to an individual or radiation level detected in excess of limits established by this chapter and each theft or loss of source(s) of radiation, determining the cause, and taking steps to prevent its recurrence;

D. Having a thorough knowledge of management policies and administrative procedures of the registrant and keeping management informed on a periodic basis of the performance of the registrant's radiation protection program, if applicable;

E. Assuming control and having the authority to institute corrective actions including shut-down of operations when necessary in emergency situations or unsafe conditions;

F. Maintaining records as required by this chapter; and

G. Ensuring that personnel are adequately trained and complying with this chapter, the conditions of the certificate of registration, and the operating and safety procedures of the registrant.

[20.3.2.1 NMAC – Rp 20.3.2.1 NMAC, xx/xx/2026]

### **20.3.2.217 - 20.3.2.200 [RESERVED]**

#### **HISTORY OF 20.3.2 NMAC:**

Pre-NMAC History: The material in this part was derived from that previously filed as follows: EIB 73-2, Regulations for Governing the Health and Environmental Aspects of Radiation filed on 7/9/73; EIB 73-2, Amendment 1, Regulations for Governing the Health and Environmental Aspects of Radiation filed on 4/17/78; EIB RPR-1, Radiation Protection Regulations filed on 4/21/80; EIB RPR-1, Amendment 1, Radiation Protection Regulations filed on 10/13/81; EIB RPR-1, Amendment 2, Radiation Protection Regulations filed on 12/15/82; and EIB RPR-1, Radiation Protection Regulations filed on 3/10/89.

History of Repealed Material: **[RESERVED]**

Other History: EIB RPR 1, Radiation Protection Regulations, filed 3/10/89 renumbered and reformatted to 20 NMAC 3.1, Radiation Materials and Radiation Machines, filed 4/3/95. 20 NMAC 3.1, Radiation Materials and Radiation Machines, filed 6/17/99 internally renumbered and reformatted replaced 20 NMAC 3.1, filed 4/3/95. The material in this part was derived from that previously filed as: 20 NMAC 3.1.Subpart 2, Registration of Radiation Machines and Services, filed 6/17/99 recompiled as 20.3.2 NMAC, effective 11/27/01.