Amend Section 30306 to read as follows:

§ 30306. Definitions.

(a) “Automatic exposure control” means a device which automatically controls one or more technique factors in order to obtain at a preselected location(s) a required quantity of radiation.

(b) “Cineradiography” means the making of a motion-picture record of the successive images appearing on a fluorescent screen.

(c) “Contact therapy” means irradiation of accessible lesions usually employing a very short source-skin distance and potentials of 40-50 KV.

(d) “Dead-man switch” means a switch so constructed that a circuit-closing contact can only be maintained by continuous pressure by the operator.

(e) “Diagnostic-type tube housing” means an X-ray tube housing so constructed that the leakage radiation measured at a distance of 1 meter from the source cannot exceed 100 milliroentgens in 1 hour when the tube is operated at its maximum continuous rate of current for the maximum rated tube potential.

(f) “Filter” means material placed in the useful beam to absorb preferentially the less penetrating radiations.

(g) “Interlock” means a device for precluding access to an area of radiation hazard either by preventing entry or by automatically removing the hazard.

(h) “Leakage radiation” means all radiation coming from within the tube housing except the useful beam.

(i) “Protective barrier” means a barrier of attenuating materials used to reduce radiation exposure.

(j) “Primary protective barrier” means a barrier sufficient to attenuate the useful beam to the required degree.

(k) “Scattered radiation” means radiation that, during passage through matter, has been deviated in direction.

(l) “Secondary protective barrier” means a barrier sufficient to attenuate stray radiation to the required degree.

(m) “Shutter” means a device, generally of lead, fixed to an X-ray tube housing to intercept the useful beam.

(n) “Stray radiation” means radiation not serving any useful purpose. It includes leakage and scattered radiation.

(o) “Therapeutic-type tube housing” means,

1. For X-ray therapy equipment not capable of operating at 500 kVp or above, an X-ray tube housing so constructed that the leakage radiation at a distance of 1 meter from the source does not exceed 1 roentgen in an hour when the tube is operated at its maximum rated continuous current for the maximum rated tube potential.

2. For X-ray therapy equipment capable of operating at 500 kVp or above, an X-ray tube housing so constructed that the leakage radiation at a distance of 1 meter from
the source does not exceed either 1 roentgen in an hour or 0.1 percent of the useful beam dose rate at 1 meter from the source, whichever is greater, when the machine is operated at its maximum rated continuous current for the maximum rated accelerating potential.

(3) In either case, small areas of reduced protection are acceptable provided the average reading over any 100 square centimeters area at 1 meter distance from the source does not exceed the values given above.

(p) “Useful beam” means that part of the radiation which passes through the window, aperture, cone, or other collimating device of the tube housing. (T17-30306-T24).

(a) The definitions in section 30100 shall apply to this article.

(b) As used in this article:

(1) “Approved continuing education credit” means 50 to 60 minutes of instruction received in subjects related to medical or health physics, as applicable, and accepted for purposes of credentialing, assigning professional status, or certification by:

(A) The Commission on Accreditation of Medical Physicists Educational Programs; or

(B) American Academy of Health Physicists.

(2) “Automatic exposure control” means a device which automatically controls one or more technique factors in order to obtain at a preselected location(s) a required quantity of radiation.

(3) “Cineradiography” means the making of a motion picture record of the successive images appearing on a fluorescent screen.

(4) “Contact therapy” means irradiation of accessible lesions, usually employing a very short source-skin distance and potentials of 40-50 KV.

(5) “Dead-man switch” means a switch so constructed that a circuit-closing contact can only be maintained by continuous pressure by the operator.

(6) “Diagnostic medical physicist” means an individual who performs the tasks specified in section 30307(b)(3) and (b)(4) and:

(A) Holds a bachelor’s degree in medical physics, health physics, a physical science, engineering, or applied math from an accredited college or university; and

(B) Has completed 2,000 hours of training and 2,000 hours of work experience in evaluating and testing diagnostic X-ray systems.
(7) “Diagnostic-type tube housing” means an X-ray tube housing so constructed that the leakage radiation measured at a distance of one meter from the source cannot exceed 100 milliroentgens in one hour when the tube is operated at its maximum continuous rate of current for the maximum rated tube potential.

(8) "Direct supervision" means that the supervising individual is physically present and available within the facility during the performance of tasks by the supervised individual.

(9) “DMP” means a diagnostic medical physicist.

(10) “Filter” means material placed in the useful beam to absorb preferentially the less penetrating radiations.

(11) “Health physicist” means an individual who meets the requirements of section 30313.05 and performs tasks specified in sections 30307 and 30312.

(12) “HP” means a health physicist.

(13) “Interlock” means a device for precluding access to an area of radiation hazard, either by preventing entry or by automatically removing the hazard.

(14) “Leakage radiation” means all radiation coming from within the tube housing except the useful beam.

(15) “Personal supervision” means that the supervising individual is physically present to observe, and correct, as needed, the performance of the individual performing the activities.

(16) “Primary protective barrier” means a barrier sufficient to attenuate the useful beam to the required degree.

(17) “Protective barrier” means a barrier of attenuating materials used to reduce radiation exposure.

(18) “Scattered radiation” means radiation that, during passage through matter, has been deviated in direction.

(19) “Secondary protective barrier” means a barrier sufficient to attenuate stray radiation to the required degree.

(20) “Shutter” means a device, generally of lead, fixed to an X-ray tube housing to intercept the useful beam.
(21) “Stray radiation” means radiation not serving any useful purpose. It includes leakage and scattered radiation.

(22) “Supervision” means responsibility for the acts and omissions of persons being supervised, control of the quality, radiation safety, and technical aspects of activities being supervised, and being available to the supervised individual.

(23) “Therapeutic medical physicist” means an individual who meets the requirements of section 30313.10 and performs the tasks specified in section 30312(b), but does not include an individual authorized pursuant to section 30315.60.

(24) “Therapeutic-type tube housing” means:

(A) For therapeutic X-ray equipment not capable of operating at 500 kilovolt peak (kVp) or above, an X-ray tube housing so constructed that the leakage radiation at a distance of one meter from the source does not exceed one roentgen in one hour when the tube is operated at its maximum rated continuous current for the maximum rated tube potential.

(B) For therapeutic X-ray equipment capable of operating at 500 kVp or above, an X-ray tube housing so constructed that the leakage radiation at a distance of one meter from the source does not exceed either one roentgen in one hour or 0.1 percent of the useful beam dose rate at one meter from the source, whichever is greater, when the machine is operated at its maximum rated continuous current for the maximum rated accelerating potential.

(C) In either case, small areas of reduced protection are acceptable, provided the average reading over any 100 square centimeters area at one meter distance from the source does not exceed the values given above.

(25) “TMP” means a therapeutic medical physicist.

(26) “Useful beam” means that part of the radiation which passes through the window, aperture, cone, or other collimating device of the tube housing.

Amend Section 30307 to read as follows:

§ 30307. Fluoroscopic Installations.

(a) Equipment. The user shall ensure fluoroscopic equipment meets the following:

(1) through (3) No change to Text.

(4) The equipment shall be so constructed that the entire cross-section of the useful beam is attenuated by a primary protective barrier. This barrier is usually the viewing device, either a conventional fluoroscopic screen or an image intensification mechanism.

   (A) The lead equivalent of the barrier of conventional fluoroscopes shall be at least 1.5 millimeters for equipment capable of operating up to 100 kVp, at least 1.8 millimeters for equipment whose maximum operating potential is greater than 100 kVp and less than 125 kVp, and at least 2.0 millimeters for equipment whose maximum operating potential is 125 kVp or greater. Special attention must be paid to the shielding of image intensifiers so that neither the useful beam nor scattered radiation from the intensifier can produce a radiation hazard to the operator or personnel. With the fluorescent screen 14 inches (35 cm) from the panel or table top, the exposure rate 2 inches (5 cm) beyond the viewing surface of the screen shall not exceed 30 mR/hr for each R per minute at the table top with the screen in the useful beam without a patient and with the fluoroscope operating at the highest potential employed.

   (B) through (D) No change to Text.

(5) through (6) No change to Text.

(7) Useful beam exposure rate.

   (A) All fluoroscopic equipment. For routine fluoroscopy, the exposure rate measured at the point where the center of the useful beam enters a typical patient shall be as low as is practicable and shall not exceed 5 roentgens per minute under the conditions specified herein. This limit shall not apply during magnification procedures or the recording of fluoroscopic images where higher exposure rates are required.

Compliance with this paragraph shall be determined using the measuring specifications
of Section 30307 subsection (a)(7)(D), plus the following procedures when the automatic exposure rate control is used:

1. The useful beam exposure rate shall be measured with a phantom equivalent to 9 inches of water or 7 7/8 inches of lucite, intercepting the entire useful beam.

2. If the X-ray source is below the table, the X-ray exposure rate shall be measured with the nearest part of the imaging assembly located at 14 inches above the table top.

3. The field size at the point of exposure rate measurement shall be at least 6 ¼ square inches in area in the plane perpendicular to the central ray.

(7)(B) through (11) No change to Text.

(b) Operating Procedures. The user shall ensure the following:

(1) No change to Text.

(2) On fluoroscopes with automatic exposure controls the operator shall monitor the tube current and potential at least once each week to ascertain that they are in their usual ranges for a given set of operating parameters. This requirement may be met by adjusting the controls to usual settings for fluoroscopying an average patient, and using a phantom of any suitable material with attenuation roughly equivalent to six to ten inches of water. Whenever the monitored tube current or potential vary in a way which could increase the patient X-ray exposure rate by more than 25% over the latest exposure rate measurement required by Section 30307 subsection (b)(3), the cause(s) for the change shall be determined promptly and the patient exposure rate shall be remeasured. On fluoroscopes with manual exposure control only, the operator shall monitor the tube current and potential at least once each day during use to ascertain that they are within the normal ranges used by the facility. A written log shall be kept of all monitored readings and shall include at least the tube current and potential, the date, identification of the fluoroscope, and name of the person who did the monitoring. Records of all monitored readings shall be preserved at the facility for at least three years.

(3) Measurements of the table top or patient exposure rate shall be made by or under the supervision of a DMP, HP or TMP at least once each year for units with automatic exposure control, and at least once each 3 years for units without automatic
exposure control, and immediately following alteration or replacement of a major component, such as the X-ray tube, the exposure controls, the imaging assembly, and the power source.

(4) On the cineradiography equipment, the exposure rates to which patients are normally subjected shall be determined by or under the supervision of a DMP, HP or TMP at least once each year, and immediately following alterations or replacement of a major component, such as the X-ray tube, the exposure controls, the imaging assembly, and the power source.

(c) Users shall maintain for inspection records that demonstrate a DMP, HP or TMP meets the applicable criteria and that the measurements specified in subsections (b)(3) and (b)(4) were completed; the records shall indicate the date the measurements were taken and the exposure value obtained.


Amend Section 30312 to read as follows:

§ 30312. Therapeutic X-Ray Installations.

(a) Equipment. The user shall ensure therapeutic X-ray equipment meets the following:

(1) through (11) No change to Text.

(b) Operating Procedures. The user shall ensure the following:

(1) When a patient must be held in position for radiation therapy, patient immobilization mechanical supporting or restraining devices shall be used.

(2) through (3) No change to Text.

(4) A calibration of the output of each radiation therapy therapeutic X-ray system shall be performed before the system is first used for irradiation of a patient, and thereafter at intervals not to exceed 24 months. Therapy Therapeutic X-ray equipment
shall not be used for any therapy treatments except at those combinations of effective energy, field size, and treatment distance for which the equipment has been calibrated. The calibration shall be performed by or under the direct supervision of a person who has been determined by the Department to have adequate training, experience and knowledge in radiation therapy physics, and who shall be present at the facility during such calibration. After any change which might significantly alter the output, spatial distribution, or other characteristics of the therapy beam, the parameters which might be affected shall be measured.

(A) through (B)  No change to Text.

(5) All new installations and existing installations not previously surveyed shall have a radiation protection survey performed by or under the direction of an HP or a TMP of a person determined by the Department to have adequate knowledge and training to advise regarding radiation protection needs, to measure ionizing radiation and to evaluate safety techniques. If the survey shows that supplementary shielding is required, a resurvey shall be performed by or under the supervision of an HP or TMP after its installation. In addition, a resurvey shall be made after every change which might decrease radiation protection significantly. The surveyor shall report his findings in writing to the user. The report shall indicate whether or not the installation is in compliance with all applicable radiation protection requirements of this section. The user shall report the findings of the survey in writing to the Department within 15 days of his receipt of the survey report.

(6) The exposure rate or dose rate of the useful beam and the size and shape of the useful beam shall be known with reasonable certainty at all times during operation of the radiation therapy apparatus. Therapeutic X-ray systems for medical purposes.

(7) Spot checks shall be performed at least once each week for therapeutic X-ray systems operating at potentials above 500 kVp, and at least once each month for therapeutic X-ray systems operating at 500 kVp or below.

(A) and (B)  No change to Text.

(C) The spot check procedures shall be in writing and shall have been developed or approved by a TMP the individual who made the most recent calibration of the system pursuant to Section 30312(b)(4). The written spot check procedures shall specify when
measurements and determinations indicate an inconsistency or potential change in radiation output. When more than the minimum frequency of spot checking is necessary, the spot check procedures shall specify the frequency at which spot checks are to be performed.

(D) When spot check results are erratic or inconsistent with calibration data, the person who designed the spot check procedures, or a person of equivalent competence, a TMP shall be consulted immediately and the reason(s) for cause of the inconsistency corrected before the system is used for patient irradiation.

(8) through (9)  

No change to Text.


Amend Section 30313 to read as follows:

§ 30313. Special Requirements for X-Ray Therapy Therapeutic X-ray Equipment Operated at Potentials of 50 kV and Below.

(a) Equipment. The user shall ensure therapeutic X-ray equipment shall meet the following:

(1) through (3)  

No change to Text.

(b) Operating Procedures. The user shall comply with the following:

(1) All provisions of §section 30312(b) apply except 30312(b)(1) and 30312(b)(7).

(2) through (4)  

No change to Text.

§ 30313.05. Health Physicist Requirements.

(a) A person who performs as an HP, as defined in section 30306, shall be authorized by the Department pursuant to section 30313.15 and:

(1) Be certified by:
   (A) American Board of Radiology in Diagnostic Medical Physics;
   (B) American Board of Health Physics;
   (C) American Board of Medical Physics in Medical Health Physics or Diagnostic Imaging Physics; or
   (D) Canadian College of Physicists in Medicine in Diagnostic Radiological Physics; or

(2) Have at least a bachelor's degree in physics, health physics, a physical science or engineering from an accredited college or university and have completed, within five years preceding the date of application:
   (A) At least 2,000 hours of training in health or radiologic physics. The number of hours required to meet this provision may not be counted toward meeting the requirement in subparagraph (B); and
   (B) At least 2,000 hours of work experience in health physics under the supervision of an HP or TMP. The number of hours required to meet this provision may not be counted toward meeting the requirement in subparagraph (A).


Adopt Section 30313.10 to read as follows:

§ 30313.10. Therapeutic Medical Physicist Requirements.
(a) A person who performs as a TMP, as defined in section 30306, shall be authorized by the Department as a TMP pursuant to section 30313.15 and:

(1) Be certified by:
(A) The American Board of Radiology in Therapeutic Medical Physics;
(B) American Board of Medical Physics in Radiation Oncology Physics; or
(C) Canadian College of Physicists in Medicine in Radiation Oncology Physics;

or

(2) Have at least a graduate degree in medical physics, health physics, a physical science, or engineering from an accredited college or university and have completed, within five years preceding the date of application:

(A) At least 2,000 hours of training in therapeutic medical physics. The number of hours required to meet this provision may not be counted toward meeting the requirement in subparagraph (B); and

(B) At least 2,000 hours of work experience in clinical therapeutic medical physics under the supervision of a TMP. The number of hours required to meet this provision may not be counted toward meeting the requirement in subparagraph (A).


Adopt Section 30313.15 to read as follows:

§ 30313.15. Eligibility for and Issuance of Health or Therapeutic Medical Physicist Authorization.

(a) To be eligible for authorization as an HP or TMP, an applicant shall submit to the Department an acceptable application containing:

(1) The applicant’s legal name, mailing address and telephone number;

(2) The applicant’s social security number (pursuant to the authority found in sections 131050, 131051, and 131200 of the Health and Safety Code and as required by section 17520 of the Family Code, providing the social security number is mandatory. The social security number will be used for purposes of identification).
(3) A statement identifying whether the applicant is requesting authorization as
an HP or a TMP;

(4) Documentation that the applicant meets the requirements of section 30313.05
or 30313.10, as applicable. If the applicant is requesting authorization pursuant to
section 30313.05(a)(2) or 30313.10(a)(2), the applicant shall submit a written letter from
the applicant’s supervisor containing:
   (A) The name, signature and date of signature of the supervising individual;
   (B) The name of the applicant;
   (C) The dates the supervisor supervised the work of the applicant;
   (D) The name of the facility where the applicant was supervised; and
   (E) A statement confirming that the applicant fulfilled the work experience
requirement pursuant to section 30313.05(a)(2)(B) or 30313.10(a)(2)(B) and is
competent to function independently as an HP or TMP, as applicable; and

(5) The application fee specified in section 30313.45.

(b) Authorization shall be valid for three years.

Note: Authority cited: Sections 114975, 115000 and 131200, Health and Safety Code.

Adopt Section 30313.20 to read as follows:

§ 30313.20. Renewal of Health or Therapeutic Medical Physicist Authorization.

(a) To be eligible for renewal of authorization as an HP or a TMP, an individual
shall, at least 30 calendar days prior to the expiration date of authorization, submit to
the Department an acceptable application consisting of:

(1) The applicant’s legal name, mailing address, telephone number and
authorization number as shown on the Department-issued authorization, except that
individuals applying for purposes of section 30313.40 shall include their social security
number. (Pursuant to the authority found in sections 131050, 131051, and 131200 of
the Health and Safety Code and as required by section 17520 of the Family Code,
providing the social security number is mandatory. The social security number will be
used for purposes of identification.)
(2) Except for individuals applying for purposes of section 30313.40, documentation confirming completion of approved continuing education credits as specified in section 30313.35 that includes:

(A) The name of the approving organization;
(B) The name of the instructor and their contact information;
(C) A description of the instruction provided; and
(D) The dates of the instruction; and

(3) The fee for renewal as specified in section 30313.45.


Adopt Section 30313.25 to read as follows:

§ 30313.25. Change of Name, Address or Social Security Number.

Each HP or TMP authorized pursuant to section 30313.15 shall report in writing to the Department, within 30 calendar days, any change of name, mailing address or social security number.


Adopt Section 30313.30 to read as follows:

§ 30313.30. Application Deadlines for Health or Therapeutic Medical Physicist Authorization.

(a) For purposes of HP or TMP authorization issued pursuant to sections 30313.15 or 30313.20:

(1) Receipt of an application, information, documentation or fee shall be deemed to occur on the date the application, information, documentation or fee is received by the Department;

(2) Written notification by the Department to applicants shall be deemed to occur on the date the notification is postmarked or, if sent electronically, the date sent as indicated on the electronic communication.
(b) The Department shall notify the applicant in writing of one of the following within 30 calendar days of receipt of an application:

(1) The application is not acceptable and what specific information, documentation or fee, the applicant shall submit within 30 calendar days from the date of the Department’s written request for the application to be considered acceptable: or

(2) The application is acceptable and that the applicant has met the applicable eligibility requirements.

(c) The Department shall deem an application withdrawn by an applicant who fails to respond to the Department’s written request for information, documentation or fees pursuant to subsection (b)(1). The applicant may reapply by submitting a new application.


Adopt Section 30313.35 to read as follows:

§ 30313.35. Requirements for Continuing Education.

An HP or TMP shall in the three years immediately preceding the expiration date of their authorization earn 15 approved continuing education credits as defined in section 30306.


Adopt Section 30313.40 to read as follows:

§ 30313.40. Previously Approved or Authorized Health or Therapeutic Medical Physicists.

(a) An individual authorized or approved in accordance with section 30312 as that section read prior to [effective date of regulation to be inserted by Office of
Administrative Law] shall remain authorized or approved only if the individual submits to the Department:

(1) An acceptable application pursuant to section 30313.20 within three years of [effective date of regulation to be inserted by Office of Administrative Law]. If the application is not received by the Department by that date, authorization is canceled. To re-establish a canceled authorization, an individual shall comply with section 30313.15 and shall be considered a new applicant.

(b) Individuals, as described in subsection (a), shall be subject to sections 30313.25 and 30313.50, until the issuance of authorization pursuant to section 30313.20 occurs. Upon said issuance, the individual shall be subject to sections 30313.10 through 30313.50, as applicable, and this section shall no longer apply.


Adopt Section 30313.45 to read as follows:

§ 30313.45. Fees.

(a) The application fee for authorization pursuant to section 30313.15 shall be $312.00.

(b) An individual applying to renew authorization pursuant to section 30313.20 shall pay a renewal fee of $267.00.

(c) A penalty fee of 25% of the fee for renewal shall be charged for any renewal that is more than 30 calendar days past due.

(d) Failure to pay the renewal fee on or before the expiration date of the authorization shall automatically suspend the authorization. If the renewal fee is not paid within six months following such date, the authorization shall be revoked. An authorization revoked for nonpayment of the renewal fee may be reinstated within five years from the time of suspension upon payment of the penalty fee specified in paragraph (c) plus twice the renewal fee specified in subsection (b). If the application for reinstatement is not made within five years from the date of suspension of the

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authorization, the authorization shall be canceled and shall not be subject to reinstatement.

(e) Fees required by this section shall be nonrefundable and subject to adjustment pursuant to Health and Safety Code section 100425.


Adopt Section 30313.50 to read as follows:

§ 30313.50. Grounds for Amendment, Restriction, Suspension or Revocation of Authorization.

(a) Authorization issued pursuant to section 30313.15 or section 30313.40 may be amended, restricted, suspended or revoked for any of the following:

(1) The submission of false, incorrect or fraudulent information to obtain or renew authorization;

(2) The impersonation of another authorized individual, or allowing another person to use one’s own authorization, for the purpose of providing health physics or therapeutic medical physics services;

(3) Unprofessional conduct, including, but not limited to, incompetence, gross negligence, physical, mental, or verbal abuse of patients, or misappropriation of property of patients or others;

(4) The violation of, or the attempt to violate, any provision of the Radiologic Technology Act (RT Act) (Health and Safety Code section 27), the Radiation Control Law (RCL) (Health and Safety Code section 114960 et seq.) or any order of the Department;

(5) The prevention of, or the attempt to impede in any way, any lawful enforcement of the RT Act or the RCL, the regulations adopted pursuant to those provisions, or any order of the Department;

(6) Conviction of a crime substantially related to the qualifications and duties of an HP or TMP;
(7) Failure to take corrective action as directed by the Department;

(8) Suspension or revocation of certification or authorization by any entity specified in section 30313.05(a) or 30313.10(a); or

(9) Failure to pay fees.