TITLE 17. PUBLIC HEALTH
DIVISION 1. STATE DEPARTMENT OF HEALTH SERVICES
CHAPTER 5. SANITATION (ENVIRONMENTAL)
SUBCHAPTER 4. RADIATION
GROUP 3. STANDARDS FOR PROTECTION AGAINST RADIATION
ARTICLE 4. SPECIAL REQUIREMENTS FOR THE USE OF X-RAY IN THE HEALING ARTS

(1) Adopt Section 30305.1 to read as follows:

§ 30305.1. Quality Assurance General Provisions.

(a) Each user subject to this article, as specified in section 30305(a)(1), who performs radiography shall assure that:

(1) Radiographic films are stored, handled, and processed in accordance with manufacturers' recommendations. Expired film may not be used for clinical purposes.

(2) Intensifying screens, grids, viewers, film processing equipment, chemicals, and solutions are stored, used, and maintained in accordance with manufacturers' recommendations.

(3) For each X-ray machine, a technique chart is provided which establishes for each view commonly performed:
(A) Patient size versus selectable exposure factors;
(B) Source-to-Image distance (if not fixed);
(C) Grid data;
(D) Film/Screen combination; and
(E) Patient shielding (if appropriate).

Note: Authority cited: Sections 114975, 115000, 115060, 115061, 131051, 131052, 131055, and 131200, Health and Safety Code. Reference: Sections 114965, 114970, 115000, 115060, and 115061, Health and Safety Code.

(2) Adopt Section 30308.1 to read as follows:

§ 30308.1. Quality Assurance for Radiographic Installations (Other Than Mammography, Dental, and Veterinary Medicine)

(a) Each user subject to this article, as specified in section 30305(a)(1), who develops clinical radiographs for diagnostic purposes with automatic film processors for other than mammographic, dental, or veterinary use, shall assure all of the following:

(1) Each processor used to develop clinical radiographs is adjusted and maintained to meet the manufacturer's processing specifications for the highest speed radiographic film used clinically.

(2) Measurements are performed each day before clinical radiographs are processed, so as to determine that the processor is operating within the following limits:

(A) The base-plus-fog density is within plus 0.05 of the operating level established with the highest speed radiographic film used clinically;

(B) The mid-density is within plus or minus 0.15 of the operating level established with the highest speed radiographic film used clinically; and

(C) The density-difference is within plus or minus 0.15 of the operating level established with the highest speed radiographic film used clinically.

(3) Tests are performed at intervals not to exceed three months to determine that the residual fixer level retained in clinical radiographic films is not more than 5.0 micrograms per square centimeter.

(4) Tests are performed at intervals not to exceed six months to determine that the optical density attributable to darkroom fog is not more than 0.05 when the highest speed of each type radiographic film used clinically, which has a mid-density of no less than 1.20 optical density, is exposed on the counter top for one minute under typical darkroom conditions with the safelight on.

(5) For any test result falling outside the criteria specified in this section, the problem is identified and corrective action is taken before clinical radiographs are processed.

(6) Records of the tests specified in this section, including the problems detected, corrective actions taken, and the effectiveness of those corrective actions, are maintained for at least one year from the date the test was performed.

Note: Authority cited: Sections 114975, 115000, 115060, 115061, 131051, 131052, 131055, and 131200, Health and Safety Code. Reference: Sections 114965, 114970, 115000, 115060, and 115061, Health and Safety Code.

(3) Adopt Section 30311.1 to read as follows:

§ 30311.1. Quality Assurance for Dental Radiography.

(a) Each user subject to this article, as specified in section 30305(a)(1), using intra-oral film for dental radiography of human beings shall assure all of the following:

(1) A reference film meeting the interpreting dentists' criteria for image density, contrast, sharpness and overall quality is selected for use in daily comparisons of dental radiographs.

(2) For each day dental radiographs are processed, clinical radiographs are compared to the selected reference film for density, contrast, sharpness, and overall image quality.

(3) Corrective action is taken when observable changes occur in clinical radiographic image density, contrast, sharpness and overall quality.

(4) Records of the corrective actions taken, and the effectiveness of those corrective actions, are maintained for a minimum of one year from the date the corrective action was taken.

(5) Corrective action, as directed by the Department, is taken if the entrance exposure to an adult patient for a routine intraoral bitewing exam is found by the Department to be outside the ranges specified in the following table.

Tube Potential[1] (kVp)[2]	"D" Speed Film (mR)[3]	"E or F" Speed Film (mR)[3]
50	425-575	220-320
55	350-500	190-270
60	310-440	165-230
65	270-400	140-200
70	240-350	120-170
75	170-260	100-140
80	150-230	90-120
85	130-200	80-105
90	120-180	70- 90
95	110-160	60- 80
100	100-140	50- 70

[1]Linear extrapolation or interpolation shall be used for an x-ray tube potential (kVp) not listed in the table.
[2]The kVp shall be measured to determine the correct exposure limit to be applied.
[3]Exposures values are specified as free-in-air exposures without backscatter.

Note: Authority cited: Sections 114975, 115000, 115060, 115061, 131051, 131052, 131055, and 131200, Health and Safety Code. Reference: Sections 114965, 114970, 115000, 115060, and 115061, Health and Safety Code.