

Updated Informative Digest

The Radiation Control Law (Health & Saf. Code, §§114960 – 115273), requires the Department of Health Services (Department) to develop programs for licensing and regulating radioactive materials. (Health & Saf. Code, § 115000, subd. (b).) In 1962, the State of California ratified and approved the State entering into an agreement with the United States Atomic Energy Commission, the predecessor of the United States Nuclear Regulatory Commission (NRC), by which the federal agency discontinued its regulatory authority over certain radioactive materials. (Health & Saf. Code, § 115230.) By such action California became an "Agreement State."

A provision of the agreement between California and the NRC specifies that the State "will use its best efforts to maintain continuing compatibility between its program and the program of the [United States Atomic Energy] Commission for the regulation of like materials." (Health & Saf. Code, § 115235, art. V.) NRC's stated policy is "to evaluate Agreement State programs established pursuant to Section 274 of the Atomic Energy Act of 1954, as amended, to ensure they are adequate to protect public health and safety and compatible with NRC's regulatory program."¹ To determine a state's compatibility, the NRC uses Management Directive 5.9, *Adequacy and Compatibility of Agreement State Programs, Handbook 5.9*.² This handbook describes the specific criteria and process that are used to clarify the NRC program elements that should be adopted and implemented by an Agreement State for purposes of compatibility, and those NRC program elements that have a particular health and safety significance. The NRC rates the elements on the degree of compatibility required. Thus, the NRC requires that some be adopted by the states in a form identical to the NRC's while adoption of others need not be identical but are required to meet the essential objective of the program element. The NRC evaluates Agreement States every three to four years to determine if a state's radiation safety program meets the adequacy and compatibility criteria. If California fails to meet those criteria the NRC may revoke California's status as an Agreement State.

Radiation is used daily to detect defects in airplanes, pipelines, storage tanks, engines, and other non-human objects in, what is called, industrial radiography. Industrial radiography means the examination of the physical structure of materials, other than human beings or animals, by non-destructive methods, utilizing radiation. (Cal. Code Regs., tit. 17, §30330(b).) The levels of radiation found in such operations are very high and can result in immediate harm to those exposed. Because of this, these radiographic operations are evaluated annually to ensure the public and workers are protected from unnecessary and harmful radiation and that those authorized to possess radiation sources continue to operate and control those sources safely.

¹ "Adequacy and Compatibility of Agreement State Programs," Management Directive 5.9, page 1. The document is available at the Nuclear Regulatory Commission, Office of State Programs website: <http://www.hsrn.gov/nrc/procfm.htm> (Reference 1.)

² "Adequacy and Compatibility of Agreement State Programs," Management Directive 5.9, Handbook 5.9. The document is available at the Nuclear Regulatory Commission, Office of State Programs website: <http://www.hsrn.gov/nrc/procfm.htm> (Reference 2.)

Because industrial radiography is performed throughout the United States, the NRC proposed, in 1994, to require individuals who perform industrial radiography using radioactive materials be certified. (59 Fed.Reg. 9429 (Feb. 28, 1994).) The NRC finalized those regulations (62 Fed.Reg. 28947 (May 28, 1997)) and now requires an individual to be certified and that at least two qualified individuals (two-person rule), one of whom must be a certified radiographer, must be present during radiographic operations. Due to the cross-jurisdictional nature of industrial radiography, the NRC determined that Agreement States must have essentially identical requirements for radiographer certification and the two-person rule, both of which are a compatibility category B. (See attachment 1 for definitions of compatibility categories.) The NRC also specified the criteria an organization must meet to be considered as a certification organization recognized by the NRC. Such an organization is called a certifying entity. (10 C.F.R. §34.3.)

Additionally, the NRC made changes addressing dosimetry technology. (65 Fed.Reg. 63749 (Oct. 24, 2000).) Dosimeters are used to determine the amount of radiation an individual receives. Recent developments have produced dosimeters that have higher sensitivities to radiation than either film badges or thermoluminescent devices (TLD), and require processing to determine the radiation dose. For example, optically stimulated luminescent dosimeters use optical lasers for processing, unlike the processing for a film badge that requires photographic development or the TLD that is processed using heat. Thus, it is likely that new dosimeter technologies and other processing techniques are likely to appear in the future. Therefore, the NRC has modified its regulation to allow the use of any type of personnel dosimeter that requires processing to determine radiation dose, provided that the processor of the dosimeter is accredited to process this type of dosimeter under the National Voluntary Laboratory Accreditation Program, operated by the National Institute of Standards and Technology.

The Department not only maintains a radiation control program for regulating radioactive material as an Agreement State but also maintains that program for regulating radioactive material not subject to the Atomic Energy Act of 1954 and radiation machines that produce radiation. Therefore, the purpose of this proposal is to specify industrial radiographer certification and address changes in dosimetry technology required by the NRC and to specify radiographer certification for certain uses of radiation machines because they present similar radiation hazards as compared to radioactive material. Further, existing regulations are updated.

In developing this proposal, a workshop was held on May 14, 2002 to get input from stakeholders. Attendee's suggestions are addressed in this proposal. Further, because the NRC specifies criteria certification programs must meet to be recognized, other Agreement States were contacted during development of this proposal. Thus, the Department is aligning this proposal to be consonant insofar as possible with other state certification programs, which is consistent with Legislative policy. (Health & Saf. Code, § 114965(c).)

This regulation proposal also amends the statutory authority and reference citations for the applicable Health and Safety Code sections as recodified by Statutes 1995, chapter 415.

The regulations that implement, interpret and make specific the provisions of the Radiation Control Law are in title 17, California Code of Regulations, sections 30100 through 30395. Accordingly, the Department proposes to amend or adopt the following sections:

Amend **section 30195.3** for consistency with this proposal and NRC regulations.

Amend **section 30295** to make nonsubstantial changes for clarity.

Amend **section 30330** to specify defined terms used in the proposal.

Amend **section 30331** to specify the requirements for approval of radiation safety training providers.

Amend **section 30332** to make the section consistent with NRC regulations.

Amend **section 30332.1** to make the section consistent with NRC regulations.

Amend **section 30332.2** to make the section consistent with NRC regulations.

Amend **section 30332.3** to make the section consistent with NRC regulations.

Amend **section 30332.4** to make the section consistent with NRC regulations.

Amend **section 30332.5** to make the section consistent with NRC regulations.

Amend **section 30332.6** to make the section consistent with NRC regulations.

Amend **section 30332.7** to make the section consistent with NRC regulations.

Amend **section 30332.8** to make the section consistent with NRC regulations.

Amend **section 30333** to make the section consistent with NRC regulations.

Adopt **section 30333.05** to specify radioactive materials trainer requirements.

Adopt **section 30333.07** to specify radioactive materials radiation safety officer requirements.

Amend **section 30333.1** to make the section consistent with NRC regulations.

Amend **section 30333.2** to make the section consistent with NRC regulations.

Adopt **section 30333.3** to specify where copies of certain records must be maintained.

Amend **section 30334** to make the section consistent with NRC regulations and to require at least two qualified individuals be present during radiographic operations.

Repeal **section 30335** to recodify it to section 30335.10.

Adopt **section 30335.1** to specify radiographer certification categories and scopes.

Adopt **section 30335.2** to specify radiographer certification eligibility requirements.

Adopt **section 30335.3** to specify those certifying entities acceptable for reciprocity.

Adopt **section 30335.4** to specify provisional radiographer certification requirements needed for implementation of full radiographer certification.

Adopt **section 30335.5** to specify the contents of a complete radiographer certification application.

Adopt **section 30335.6** to require certificate holders to inform the Department of name or address changes.

Adopt **section 30335.10**, which is recodified from section 30335, to present the training curriculum in a sentence format. The minimum number of hours of training is specified.

Amend **section 30336** to clarify requirements for shielded-room radiography and require specific training for operators. Requirements for field radiography are addressed in proposed section 30336.1. Requirements for cabinet radiography are deleted and addressed in section 30337. The American National Standard N537-1976 "Radiological Safety Standard for the Design of Radiographic and Fluoroscopic Industrial X-ray Equipment" (published as NBS Handbook 123, issued August 1977) is incorporated by reference.

Adopt **section 30336.1** to clarify the requirements for field radiography. The American National Standard N537-1976 "Radiological Safety Standard for the Design of Radiographic and Fluoroscopic Industrial X-ray Equipment" (published as NBS Handbook 123, issued August 1977) is incorporated by reference.

Adopt **section 30336.5** to specify radiation machine radiographer assistant requirements.

Adopt **section 30336.6** to specify radiation machine radiographer trainer requirements.

Adopt **section 30336.7** to specify radiation machine radiation safety officer requirements.

Adopt **section 30336.8** to specify the fees for certificates, approvals, replacement of identification cards and that those fees are nonrefundable.

Amend **section 30337** to clarify the requirements for cabinet X-ray systems. Requirements for cabinet radiography equipment addressed by existing section 30336(a) are placed in this section.

Adopt **section 30338** to specify grounds for revocation, suspension, amendment or restriction of radiographer certification and training provider approvals.

Authority: Sections 115000, 131050, 131051 and 131200, Health and Safety Code.

Reference: Sections 114965, 114970, 115000, 115060, 115065, 115105, 115110, 115230, and 115235, Health and Safety Code.