

## **Excerpts from Title 17, California Code of Regulations**

### **Division 1, Chapter 5, Subchapter 4.0. Radiation**

#### **Group 1. General**

#### **Article 1. Definitions**

### **§ 30100. General Definitions.**

As used in subchapter 4:

(a) "Act" means the "Radiation Control Law," Health and Safety Code, Division 104, Part 9, chapter 8, sections 114960 et seq.

(b) "Agreement State" means any state with which the United States Atomic Energy Commission or Nuclear Regulatory Commission has entered into an effective agreement under section 274b of the Atomic Energy Act of 1954, Title 42, United States Code, section 2021(b) (formerly section 274(b)).

(c) "Decommission" means to remove safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license.

(d) "Department" means the California Department of Public Health.

(e) "Depleted uranium" means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

(f) "Hazardous radioactive material," as used in section 33000 of the California Vehicle Code and 114820(d) of the Health and Safety Code means any "highway route controlled quantity" of radioactive material as such material is defined in title 49, Code of Federal Regulations, section 173.403.

(g) "Human use" means the internal or external administration of radiation or radioactive materials to human beings.

(h) "Installation" means the location where one or more reportable sources of radiation are possessed.

(i) "License," except where otherwise specified, means a license issued pursuant to group 2, Licensing of Radioactive Material.

(j) "Other official agency specifically designated by the Department" means an agency with which the Department has entered into an agreement pursuant to section 114990 of the Health and Safety Code.

(k) "Person" means any individual, corporation, partnership, limited liability company, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this State, any other state or political subdivision or agency thereof, and any legal successor, representative, agent, or agency of the foregoing, other than the United States Nuclear Regulatory Commission, the United States Department of Energy, or any successor thereto, and other than Federal Government agencies licensed by the United States Nuclear Regulatory Commission, under prime contract to the United States Department of Energy, or any successor thereto.

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(l) "Personnel monitoring equipment" means devices designed to be worn or carried by an individual for the purpose of measuring the dose received by that individual (e.g., film badges, pocket chambers, pocket dosimeters, film rings, etc.).

(m) "Possess" means to receive, possess, use, transfer or dispose of radioactive material pursuant to this regulation.

(n) "Possessing a reportable source of radiation" means having physical possession of, or otherwise having control of, a reportable source of radiation in the State of California.

(o) "Radiation" (ionizing radiation) means gamma rays and X-rays; alpha and beta particles, high-speed electrons, neutrons, protons, and other nuclear particles; but not sound or radio waves, or visible, infrared, or ultraviolet light.

(p) "Radiation machine" means any device capable of producing radiation when the associated control devices are operated, but excluding devices which produce radiation only by the use of radioactive material.

(q) "Radioactive material" means any material which emits radiation spontaneously.

(r) "Registrant" means any person who is registering or who has registered with the Department pursuant to group 1.5, Registration of Sources of Radiation.

(s) "Reportable sources of radiation" means either of the following:

(1) Radiation machines, when installed in such manner as to be capable of producing radiation.

(2) Radioactive material contained in devices possessed pursuant to a general license under provisions of sections 30192.1 and 30192.6.

(t) "Research and development" means theoretical analysis, exploration, experimentation or the extension of investigative findings and scientific or technical theories into practical application for experimental or demonstration purposes, including the experimental production and testing of models, prototype devices, materials and processes; but shall not include human use.

(u) "Sealed source" means any radioactive material that is permanently encapsulated in such manner that the radioactive material will not be released under the most severe conditions likely to be encountered by the source.

(v) "Source of radiation" means a discrete or separate quantity of radioactive material or a single radiation machine.

(w) "Special nuclear material" means:

(1) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Department declares by rule to be special nuclear material after the United States Nuclear Regulatory Commission, or any successor thereto, has determined the material to be such, but does not include source material; or

(2) Any material artificially enriched by any of the foregoing, but does not include source material.

(x) "Specific license" means a license or the equivalent document issued to a named person by the Department or by the Nuclear Regulatory Commission or by any other Agreement State.

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(y) "This regulation" means: California Code of Regulations, Title 17, Division 1, Chapter 5, Subchapter 4.

(z) "User" means any person who is licensed to possess radioactive material or who has registered as possessing a reportable source of radiation pursuant to groups 1.5 and 2 of this subchapter, or who otherwise possesses a source of radiation which is subject to such licensure or registration.

(aa) "Worker" means any individual engaged in activities subject to this regulation and controlled by a user, but does not include the user.

Note: Authority cited: Sections 114975, 115000 and 131200, Health and Safety Code.  
Reference: Sections 114965, 114970, 114985, 115060, 131050, 131051 and 131052, Health and Safety Code.

## **Group 2. Licensing of Radioactive Materials**

### **Article 4. Licenses**

**NOTE: § 30194 is proposed to be amended. The existing section provisions are provided below.**

#### **§ 30194. Approval of Applications and Specific Terms and Conditions for Specific Licenses.**

(a) An application for a new specific license or for renewal or amendment of an existing license will be approved if the Department determines that:

(1) the applicant or his specified personnel are qualified by reason of training and experience to use radioactive material of the kinds and quantities and for the purposes requested, in such a manner as to provide reasonable and adequate assurance of protection to health, life, and property;

(2) the applicant's equipment, facilities, proposed uses and procedures are such as to provide reasonable and adequate assurance of protection to health, life, and property;

(3) the issuance of the license will not jeopardize the health and safety of the public;

(4) the applicant satisfies all applicable requirements of the Act and regulations thereunder.

(b) Prior to issuing, amending or renewing a license pursuant to the provisions of this subchapter, the Department may inspect at any reasonable time the place of business, or premises and facilities of any applicant in order to verify information contained in the application or to obtain additional information for the purpose of completing the application.

(c) No license or any right under a license shall be assigned or otherwise transferred unless approved in advance by the Department. The request for transfer of a license shall include the identity and technical and financial qualifications of the

proposed transferee, and the financial assurance for decommissioning information required by section 30195.1.

(d) Each licensee shall restrict possession of licensed material to the locations and conditions of the use authorized in the license.

(e) Each specific license shall expire on the expiration date specified as a condition of the license. However, the license shall continue to be valid if a timely application for renewal is filed. An application for renewal shall be timely if filed at least 30 days prior to the expiration date. The existing license shall not expire until the department has taken final action on the timely filed application for renewal.

(f) Applications and documents submitted shall be made available for public inspection except where the applicant identifies portions of the application as "trade secret" and the Department finds that the information is "trade secret" pursuant to provisions of the Public Records Act and Evidence Code Section 1060.

(g) Applications for specific licenses filed under Group 2 shall include information and material addressing, as applicable, the provisions of sections 30194.1, 30195, 30195.1, 30195.2, 30195.3, 30196 and 30220.

Note: Authority cited: Sections 114975, 115000 and 131200, Health and Safety Code.  
Reference: Sections 114965, 114970, 115060, 115165, 115230, 115235, 131050, 131051 and 131052, Health and Safety Code.

### **Group 3. Standards for Protection Against Radiation**

#### **Article 2. Notices, Instructions, and Reports to Workers; Inspections and Investigations**

#### **§ 30255. Notices, Instructions, and Reports to Personnel.**

(a) This section establishes requirements for notices, instructions, and reports by users to individuals engaged in work under a license or registration and options available to such individuals in connection with Department inspections of licensees or registrants to ascertain compliance with the provisions of the Radiation Control Law and regulations, orders, and licenses issued thereunder regarding radiological working conditions. The requirements in this section apply to all persons who receive, possess, use, own or transfer material licensed by or registered with the Department.

(b) Each user shall:

(1) Inform all individuals working in or frequenting any portion of a controlled area of the storage, transfer, or use of radioactive materials or of radiation in such portions of the controlled area; instruct such individuals in the health protection problems associated with exposure to such radioactive materials or radiation, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed; instruct such individuals in, and instruct them to observe, to the extent within their control, the applicable provisions of Department regulations and license conditions for the protection of personnel from exposures to radiation or radioactive materials occurring in such areas; instruct such individuals of their

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responsibility to report promptly to the licensee or registrant any condition which may lead to or cause a violation of department regulations or license conditions or unnecessary exposure to radiation or radioactive material, and of the inspection provisions of Section 30254; instruct such individuals in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation or radioactive materials; and advise such individuals as to the radiation exposure reports which they may request pursuant to this section. The extent of these instructions shall be commensurate with potential radiological health protection problems in the controlled area.

(2) Conspicuously post a current copy of this regulation, a copy of applicable licenses for radioactive material, and a copy of operating and emergency procedures applicable to work with sources of radiation. If posting of documents specified in this paragraph is not practicable the user may post a notice which describes the document and states where it may be examined.

(3) Conspicuously post a current copy of Department Form RH-2364 (Notice to Employees) in a sufficient number of places to permit individuals working in or frequenting any portion of a controlled area to observe a copy on the way to or from such area.

(4) Conspicuously post any notice of violation involving radiological working conditions or any order issued pursuant to the Radiation Control Law and any required response from the user. Department documents posted pursuant to this paragraph shall be posted within two working days after receipt of the documents from the Department; the user's response, if any, shall be posted within two working days after dispatch by the user. Such documents shall remain posted for a minimum of five working days or until action correcting the violation has been completed, whichever is later.

(5) Assure that documents, notices, or forms posted pursuant to this section shall appear in a sufficient number of places to permit individuals engaged in work under the license or registration to observe them on the way to or from any particular work location to which the document applies, shall be conspicuous, and shall be replaced if defaced or altered.

(6) Provide reports to any individual of their radiation exposure data and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of that individual as specified in this section. The information reported shall include data and results obtained pursuant to Department regulations, orders, or license conditions, as shown in records maintained by the user pursuant to Department regulations. Each notification and report shall: be in writing; include appropriate identifying data such as the name of the user, the name of the individual, the individual's Social Security number; include the individual's exposure information; and contain the following statement:

"This report is furnished to you under the provisions of the California State Department of Public Health Regulations: Standards for Protection Against Radiation. You should preserve this report for future reference."

These reports shall be provided as follows:

(A) Each user shall advise each worker annually of the worker's dose as shown in records maintained by the user pursuant to title 10, Code of Federal Regulations, part

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20, (10 CFR 20), section 20.2106 as incorporated by reference in section 30253. The user shall provide an annual report to each monitored individual pursuant to section 20.1502, incorporated by reference in section 30253, of the dose received in that monitoring year if:

1. The individual's occupational dose exceeds 100 mrem total effective dose equivalent or 100 mrem to any individual organ or tissue; or
2. The individual requests his or her annual dose report.

(B) At the request of a worker formerly engaged in work controlled by the user, the user shall furnish to the worker a report of the worker's exposure to radiation or radioactive material as shown in records maintained by the user pursuant to 10 CFR 20, section 20.2106 that has been incorporated by reference in section 30253, for each year the worker was required to be monitored pursuant to section 20.1502 and for each year the worker was required to be monitored under the monitoring requirements in effect prior to March 3, 1994. Such report shall be furnished within 30 days from the time the request is made, or within 30 days after the exposure of the individual has been determined by the user, whichever is later. This report shall cover the period of time that the worker's activities involved exposure to radiation from radioactive material licensed by, or radiation machines registered with, the Department and shall include the dates and locations of work under the license or registration in which the worker participated during this period.

(C) When a user is required pursuant to 10 CFR 20, sections 20.2202, 20.2203, or 20.2204, as incorporated by reference in section 30253, to report to the Department any exposure of an individual to radiation or radioactive material, the user shall also provide the individual a report on his exposure data included therein. Such reports shall be transmitted at a time not later than the transmittal to the Department.

(D) At the request of a worker who is terminating employment with the user that involved exposure to radiation or radioactive materials, during the current calendar quarter or the current year, each user shall provide at termination to each worker, or to the worker's designee, a written report regarding the radiation dose received by that worker from operations of the user during the current year or fraction thereof. If the most recent individual monitoring results are not available at that time, a written estimate of the dose must be provided together with a clear indication that this is an estimate.

Note: Authority cited: Sections 114975, 115000, 131051, 131052, 131055 and 131200, Health and Safety Code. Reference: Sections 114940, 114965, 115000, 115060, 115110, 115230 and 115235, Health and Safety Code.

### **Group 3. Standards for Protection Against Radiation**

#### **Article 3.1. Records and Notification**

#### **§ 30295. Notification of Incidents.**

(a) Each user shall notify the Department as soon as possible but not later than four hours after the discovery of an event that prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed

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regulatory limits or releases of licensed material that could exceed regulatory limits (events may include but are not limited to fires, explosions, and toxic gas releases).

(b) Each user shall notify the Department within 24 hours after the discovery of any of the following events involving radiation or radioactive materials:

(1) An unplanned contamination event involving licensed radioactive material that:

(A) Requires access to the contaminated area by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area;

(B) Involves a quantity of material greater than five times the lowest annual limit on intake specified in Appendix B of Title 10, Code of Federal Regulations, part 20, incorporated by reference in section 30253 for the material; and

(C) Has access to the area restricted for a reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.

(2) An event in which equipment is disabled or fails to function as designed when:

(A) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;

(B) The equipment is required to be available and operable when it is disabled or fails to function; and

(C) No redundant equipment is available and operable to perform the required safety function.

(3) An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body.

(4) An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:

(A) The quantity of material involved is greater than five times the lowest annual limit on intake specified in Appendix B of Title 10, Code of Federal Regulations, part 20, incorporated by reference in section 30253 for the material; and

(B) The damage affects the integrity of the licensed material or its container.

(c) Reports made by users in response to the requirements of this section shall be made as follows:

Each user shall make reports required by subsections (a) and (b) by telephone to the Department. To the extent that the information is available at the time of notification, the information provided in these reports shall include:

(1) The caller's name and call back telephone number;

(2) A description of the event, including date and time;

(3) The exact location of the event;

(4) The isotopes, quantities, and chemical and physical form of the licensed material involved; and

(5) Any personnel radiation exposure data available.

(d) Each user who makes a report required by this section shall submit a written follow-up report within 30 days of the initial report. These written reports shall be sent to the Department and include:

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- (1) A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;
- (2) The exact location of the event;
- (3) The isotopes, quantities, and chemical and physical form of the licensed material involved;
- (4) Date and time of the event;
- (5) Corrective actions taken or planned and the results of any evaluation or assessment; and
- (6) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

Note: Authority cited: Sections 114975, 115000 and 131200, Health and Safety Code.  
 Reference: Sections 114965, 114970, 115105, 115110, 115230, 115235, 131050, 131051 and 131052, Health and Safety Code.

**Group 3. Standards for Protection Against Radiation**  
**Article 6. Special Requirements for Radiographic Operations in Industrial Radiography**

**§ 30332.8. Reporting Requirements.**

(a) In addition to the reporting requirements specified in section 30295 and under other sections of this subchapter, each licensee shall provide a written report to the Department within 30 days of the occurrence of any of the following incidents involving radiographic exposure devices and associated equipment:

- (1) Unintentional disconnection of the source assembly from the control cable;
- (2) Inability to retract the source assembly to its fully shielded position and secure it in this position; or
- (3) Failure of any component (critical to safe operation of the device) to properly perform its intended function.

(b) The licensee shall include the following information in each report submitted under subsection (a):

- (1) A description of the equipment problem;
- (2) Cause of each incident, if known;
- (3) Manufacturer and model number of equipment involved in the incident;
- (4) Place, time and date of the incident;
- (5) Actions taken to establish normal operations;
- (6) Corrective actions taken or planned to prevent recurrence; and
- (7) Qualifications of personnel involved in the incident.

(c) Reports of radiation exposures submitted to the Department under title 10, Code of Federal Regulations section 20.2203, incorporated by reference in section 30253, which involve failure of safety components of radiography equipment, shall also include the information specified in subsection (b).



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(d) Any licensee conducting radiographic operations or storing radioactive material at any location not listed on the license for a period in excess of 180 days in a calendar year shall notify the Department prior to exceeding the 180 days.

Note: Authority cited: Sections 114975, 115000 and 131200, Health and Safety Code.  
Reference: Sections 114965, 114970, 115105, 115110, 115235, 131050, 131051 and 131052, Health and Safety Code.