28-35-135c. Definitions. As used in these regulations, each of the following terms shall have the meaning specified in this regulation: (a) "Cabinet radiography using radiation machines" means industrial radiography that is conducted in an enclosed, interlocked cabinet that prevents the radiation machine from operating unless all openings are securely closed and that is sufficiently shielded so that every location on the cabinet's exterior meets the conditions for an unrestricted area as specified in K.A.R. 28-35-214a.

(b) "Cabinet X-ray system" means an X-ray system with the X-ray tube installed in an enclosure, called a "cabinet," that is independent from existing architectural structures except the floor on which the cabinet could be placed. The cabinet is intended for the following purposes:

(1) To contain at least that portion of a material being irradiated;

(2) to provide radiation attenuation; and

(3) to exclude personnel from the interior of the cabinet during the generation of X-rays. This term shall include all X-ray systems designed primarily for the inspection of carry-on baggage at airline, railroad, and bus terminals, and in similar facilities. An X-ray tube that is used within a shielded part of a building, or X-ray equipment that may temporarily or occasionally incorporate portable shielding, shall not be considered a cabinet X-ray system.

(c) "Calendar quarter" means at least 12 but not more than 14 consecutive weeks. The first calendar quarter of each year shall begin in January. Subsequent calendar quarters shall be arranged so that no day is included in more than one calendar quarter and no day in any one year is omitted from inclusion within a calendar quarter. A licensee or registrant shall not change the method of determining and observing calendar quarters for purposes of these regulations except at the beginning of a calendar year.

(d) "Calibration" means the determination of either of the following:

(1) The response or reading of an instrument relative to a series of known radiation values over the range of the instrument; or

(2) the strength of a source of radiation relative to a standard.

(e) "Camera" means a radiographic exposure device.

(f) "Central axis of the beam" means a line passing through the virtual source and the center of the plane figure formed by the edge of the first beam-limiting device.

(g) "Cephalometric device" means a device intended for the radiographic visualization and measurement of the dimensions of the human head.

(h) "Certifiable cabinet X-ray system" means an existing, uncertified X-ray system that has been modified to meet the certification requirements specified in 21 C.F.R. 1020.40, as in effect on April 30, 1984.

(i) "Certified cabinet X-ray system" means a cabinet X-ray system that has been certified as manufactured and assembled as specified in 21 C.F.R. 1020.40, as in effect on April 30, 1984.

(j) "Certified components" means the components of X-ray systems that are subject to regulations promulgated under public law 90-602, the radiation control for health and safety act of 1968 as amended.

(k) "Certified system" means any X-ray system that has one or more certified components.

(l) "Certifying entity" means an independent certifying organization or state regulatory program meeting the requirements in K.A.R. 28-35-293.

(m) "Changeable filter" means any filter, exclusive of inherent filtration, that can be removed from the useful beam through any electronic, mechanical, or physical process.

(n) "Chelating agent" means amine polycarboxylic acids, hydroxycarboxylic acids, gluconic acids, and polycarboxylic acids.

(o) "Class" means a classification scheme for inhaled material according to its rate of clearance from the pulmonary region of the lung. For the purposes of these regulations, "lung class" and "inhalation class" shall be considered equivalent terms. Materials are classified as D, W, or Y, which applies to the following range of clearance half-times:

(1) For class D, fewer than 10 days;

(2) for class W, from 10 through 100 days; and

(3) for class Y, more than 100 days.

(p) "Coefficient of variation" and "C" mean the ratio of the standard deviation to the mean value of a population of observations. This ratio is estimated using the following equation:

$$C = \frac{s}{\bar{x}} = \frac{1}{\bar{x}} \left(\sum_{i=1}^{n} \frac{(x_i - \bar{x})^2}{n-1} \right)^{1/2}$$

where

s = Estimated standard deviation of the population

$\bar{x}$ = Mean value of observations in sample

x_i = ith observation in sample

(q) "Collective dose" means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

(r) "Collimator" means a radiation shield that is placed at the end of a guide tube or directly onto a radiographic exposure device to restrict the size of the radiation beam when the sealed source is cranked into position to make a radiographic exposure.

(s) "Committed dose equivalent" and "$H_{T,50}$" mean the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

(t) "Committed effective dose equivalent" and "$H_{E,50}$" mean the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues ($H_{E,50} = \sum w_T H_{T,50}$).

(u) "Computed tomography" means the production of a tomogram by the acquisition and computer processing of X-ray transmission data.

(v) "Consortium"means an association of medical use licensees and a positron emission tomography (PET) radionuclide production facility in the same geographical area that jointly own or share the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use.

(w) "Contact therapy" means therapy in which the X-ray tube port is put in contact with, or within five centimeters of, the surface being treated.

(x) "Contact therapy system" means a therapeutic radiation machine with a short target-to-skin distance (TSD), usually less than five centimeters.

(y) "Control cable" means the cable that is connected to the source assembly and used to drive the source to and from the exposure location.

(z) "Control drive mechanism" means a device that enables the source assembly to be moved into and out of the exposure device.

(aa) "Controlled area" means an area outside of a restricted area but inside the site boundary, access to which can be limited by the licensee or registrant for any reason.

(bb) "Control panel" means that part of the X-ray system where the switches, knobs, push buttons, and other hardware necessary for manually setting the technique factors are mounted.

(cc) "Control tube" means a protective sheath for guiding the control cable. The control tube connects the control drive mechanism to the radiographic exposure device.

(dd) "Cooling curve" means the graphical relationship between the heat units stored and the cooling time.

(ee) "Curie" means a unit of activity. One curie (Ci) is the quantity of radioactive material that decays at the rate of 3.7×10^{10} transformations per second (tps). Commonly used submultiples of the curie are the millicurie and the microcurie. One millicurie ($_{m}$Ci) = 0.001 curie = 3.7×10^{7} tps. One microcurie (μCi) = 0.000001 curie = 3.7×10^{4} tps. (Authorized by K.S.A. 48-1607; implementing K.S.A. 2017 Supp. 48-1603 and K.S.A. 48-1607; effective Dec. 30, 2005; amended May 4, 2018.)

28-35-178i. General licenses for certain units of radium-226. (a) Subject to the limitations in subsections (b), (c) and (d), a general license is hereby issued to any person to acquire, possess, use, and transfer radium-226 ~~in units not exceeding 0.1 microcurie each.~~ contained in the following products if manufactured before the effective date of this regulation:

(1) Antiquities originally intended for use by the general public. For the purposes of this paragraph, "antiquities" shall mean products originally intended for use by the general public and distributed in the late 19th and early 20th centuries, including radium emanator jars, revigators, radium water jars, radon generators, refrigerator cards, radium bath salts, and healing pads;

(2) intact timepieces containing more than 0.037 megabecquerel (1 microcurie), nonintact timepieces, and timepiece hands and dials no longer installed in timepieces;

(3) luminous items installed in air, marine, or land vehicles;

(4) all other luminous products not listed in this subsection, if not more than 100 items are used or stored at the same location at any one time; and

(5) small radium sources containing not more than 0.037 megabecquerel (1 microcurie) of radium-226.

(b) A person shall not acquire, possess, use, or transfer radium-226 pursuant to the general license issued in subsection (a) until the person has filed form RH-37 with the secretary and has received from the secretary a validated copy of the form, with a certification number assigned. Each person filing a form RH-37 shall provide all the information required by that form.

~~(c) Each general licensee under this regulation: (1) Shall not possess, at any one time and at any one location of storage or use, a total amount of radium-226 in excess of five microcuries; (2) shall store the radium-226, until used, in the original shipping container or in a container providing equivalent radiation protection; (3) shall transfer the radioactive material only to a person who is authorized to receive it pursuant to a license issued by the secretary, the United States nuclear regulatory commission or an agreement state; and (4) shall not transfer the radioactive material in any manner other than in the unopened, labeled shipping container as received from the shipper.~~

(c) Each person who acquires, receives, possesses, uses, or transfers by-product material in accordance with the general license issued in subsection (a) shall meet the following requirements:

(1) Notify the department of any indication of possible damage to the product that indicates a potential loss of the radioactive material. A report containing a brief description of the event and the remedial action taken shall be provided to the department within 30 days of the incident;

(2) not abandon any products containing radium-226. The product and any radioactive material from the product shall be disposed of only according to K.A.R. 28-35-165 or by transfer to a person authorized by a specific license to receive the radium-226 in the product or as otherwise approved by the department;

(3) not export any products containing radium-226 except in accordance with K.A.R. 28-35-178b;

(4) dispose of any products containing radium-226 at a disposal facility authorized to dispose of radioactive material in accordance with any federal or state solid or hazardous waste law, including the solid waste disposal act of 1965, 42 U.S.C. 6901 through 6992k as amended, as authorized under 42 U.S.C. 15801 et seq., by transfer to a person authorized to receive radium-226 by a specific license issued under K.A.R. 28-35-180a or equivalent regulations of an agreement state, or as otherwise approved by the department; and

(5) respond to any written request from the department to provide information relating to the general license within 30 calendar days of the date of the request or other time specified in the request. If the general licensee cannot provide the requested information within the allotted time, that licensee shall, within that same time period, request a longer period to supply the information by submitting a letter to the department and shall provide written justification as to why the person cannot comply.

(d) Each general licensee under this regulation shall file with the secretary a written report of any changes in the information filed in form RH-37. The report shall be furnished within 30 days after the effective date of the change.

(e) Each general licensee under this regulation shall be exempt from the requirements of parts 4 and 10 of these regulations with respect to the radioactive material covered by the general license.

(f) The general license specified in subsection (a) shall not authorize the manufacture, assembly, disassembly, repair, or import of any products containing radium-226, except that timepieces may be disassembled and repaired.

(g) Any general licensee under this regulation who is an individual member of the public may submit an application to the department for a waiver from the general license fee prescribed in K.A.R. 28-35-147a. (Authorized by and implementing K.S.A. 48-1607; effective, T-86-37, Dec. 11, 1985; effective May 1, 1986; amended May 4, 2018.)

28-35-179a. Application for specific license; renewal or amendment. (a) Any person may file a written application with the secretary for a specific license to acquire, possess, use, or transfer radioactive material. Each person shall file a written application with the secretary to renew or amend any specific license. Each application for a specific license, or a renewal or an amendment of an existing license, shall be submitted on the appropriate form furnished by the secretary. Each person filing an application shall provide all the information requested on the application form, and any additional relevant information requested by the secretary.

(b) Each application filed with the secretary shall be signed by the applicant or licensee, or by a person authorized to act for or on behalf of the applicant or licensee.

(c) Any application may incorporate, by reference, information provided in applications, reports, or other documents previously filed with the secretary. Each reference to information previously filed with the secretary shall be clear and specific.

(d) Any application for a specific license may include a request for a license authorizing activity at one or more installations or locations.

(e) Except as provided in subsections (f), (g), and (h), each application for a specific license to use radioactive material in the form of a sealed source or in a device that contains the sealed source shall include either of the following:

(1) Identification of the sealed source or device by manufacturer and model number as registered with the department, nuclear regulatory commission (NRC), or an agreement state; or

(2) sufficient information about the design, manufacture, prototype testing, quality control program, labeling, proposed uses, and leak testing to provide reasonable assurance that the radiation safety properties of the sealed source or device are adequate to protect health and

minimize danger to life and property. For a device, the application shall also include sufficient information about installation, service and maintenance, operating and safety instructions, and potential hazards, to provide reasonable assurance that the radiation safety properties of the sealed source or device are adequate to protect health and minimize danger to life and property.

(f) For any sealed source or device manufactured before October 23, 2012 that is not registered with the department, NRC, or an agreement state and for which the applicant is unable to provide the information specified in this regulation, the application shall include the following:

(1) All available information specified in K.A.R. 28-35-181e, concerning the sealed source, and, if applicable, the device; and

(2) sufficient additional information to demonstrate reasonable assurance that the radiation safety properties of the sealed source or device are adequate to protect health and minimize danger to life and property. The information shall include a description of the sealed source or device, a description of radiation safety features, the intended use and associated operating experience, and the results of the most recent leak test.

(g) For sealed sources and devices allowed to be distributed without the registration of safety information as required in this regulation, the applicant may supply only the name of the manufacturer, model number, and radionuclide quantity.

(h) If it is not feasible to identify each sealed source and device individually, the applicant may propose constraints on the number and type of sealed sources and devices to be used and the conditions under which the sealed sources and devices will be used, instead of

identifying each sealed source and device. (Authorized by and implementing K.S.A. 48-1607; effective, T-86-37, Dec. 11, 1985; effective May 1, 1986; amended May 4, 2018.)

28-35-181m. Specific licenses to manufacture, prepare, or distribute radiopharmaceuticals containing radioactive material for medical use. An application for a specific license to manufacture, prepare, or distribute radiopharmaceuticals containing radioactive material and used by persons as specified in part 6 of these regulations shall not be approved unless the applicant meets the requirements of this regulation and all other applicable requirements of these regulations.

(a) Each applicant shall meet the requirements in K.A.R. 28-35-180a.

(b) Each applicant shall submit evidence of either of the following:

(1) The radiopharmaceutical containing radioactive material is subject to the federal food, drug and cosmetic act or the public health service act and will be manufactured, labeled, and packaged in accordance with a new drug application (NDA) approved by the food and drug administration (FDA), a biologic product license issued by the FDA, or a "notice of claimed investigational exemption for a new drug" (IND) accepted by the FDA.

(2) The manufacture and distribution of the radiopharmaceutical containing radioactive material is not subject to the federal food, drug, and cosmetic act or the public health service act.

(c) Each applicant shall submit evidence of at least one of the following:

(1) The applicant is registered or licensed with the U.S. food and drug administration as a drug manufacturer.

(2) The applicant is registered or licensed with a state agency as a drug manufacturer.

(3) The applicant is licensed as a pharmacy by the state board of pharmacy.

(4) The applicant is operating as a nuclear pharmacy within a federal medical institution.

(5) The applicant is operating a positron emission tomography (PET) drug production facility.

(d) Each applicant shall submit the following information on the radionuclide:

(1) The chemical and physical form of the material;

(2) the packaging in which the radionuclide is shipped, including the maximum activity per package; and

(3) evidence that the shielding provided by the packaging of the radioactive material is appropriate for the safe handling and storage of radiopharmaceuticals by group licensees.

(e)(1) Each applicant shall submit a description of the following:

(A) A label that shall be affixed to each transport radiation shield, whether the shield is constructed of lead, glass, plastic, or other material, of a radioactive drug to be transferred for commercial distribution. The label shall include the following:

(i) The radiation symbol and the words "CAUTION — RADIOACTIVE MATERIAL" or "DANGER — RADIOACTIVE MATERIAL";

(ii) the name of the radioactive drug and the abbreviation; and

(iii) the quantity of radioactivity at a specified date and time. For radioactive drugs with a half-life greater than 100 days, the time may be omitted; and

(B) a label that shall be affixed to each syringe, vial, or other container used to hold a radioactive drug to be transferred for commercial distribution. The label shall include the radiation symbol and the words "CAUTION — RADIOACTIVE MATERIAL" or "DANGER

— RADIOACTIVE MATERIAL" and an identifier that ensures that the syringe, vial, or other container can be correlated with the information on the transport radiation shield label.

(2) The labels, leaflets, or brochures required by this regulation shall be made in addition to the labeling required by the FDA. The labels, leaflets, or brochures may be separate from the FDA labeling, or with the approval of the FDA, the labeling may be combined with the labeling required by the FDA.

(f) All of the following shall apply to each licensee described in paragraph (c)(3) or (c)(4), or both:

(1) The licensee may prepare radioactive drugs for medical use, if each radioactive drug is prepared by either an authorized nuclear pharmacist, as specified in paragraphs (2) and (4) of this subsection, or an individual under the supervision of an authorized nuclear pharmacist.

(2) The licensee may allow a pharmacist to work as an authorized nuclear pharmacist if at least one of the following conditions is met:

(A) The pharmacist meets the requirements in 10 C.F.R. 35.55(b) and 35.59 as adopted by reference in K.A.R. 28-35-264, and the licensee has received an approved license amendment identifying this individual as an authorized nuclear pharmacist.

(B) The pharmacist is designated as an authorized nuclear pharmacist in accordance with paragraph (4) of this subsection.

(3) The actions authorized in paragraphs (1) and (2) of this subsection shall be permitted in spite of more restrictive language in license conditions.

(4) The licensee may designate a pharmacist as an authorized nuclear pharmacist if ~~the following are met~~ at least one of the following conditions is met:

(A) The individual was a nuclear pharmacist preparing only radioactive drugs containing accelerator-produced radioactive material.

(B) The individual practiced at a government agency or federally recognized Indian tribe pharmacy before November 30, 2007 or at any other pharmacy before August 8, 2009.

~~(5) Each licensee shall provide the following to the department no later than 30 days after the date that the licensee allows, pursuant to paragraphs (2)(A) and (2)(C) of this subsection, the individual to work as an authorized nuclear pharmacist:~~

~~(A) A copy of each individual's certification by a specialty board whose certification process has been recognized as specified in 10 CFR 35.55(a), as adopted by reference in K.A.R. 28-35-264, or the department, nuclear regulatory commission, or agreement state license, or the permit issued by a licensee of broad scope, or nuclear regulatory commission master materials permittee; and~~

~~(B) a copy of the state pharmacy license or registration.~~

(5) Each licensee shall provide a copy of the state pharmacy license or registration for an individual to work as an authorized nuclear pharmacist and one of the following documents to the department:

(A) The individual's certification by a specialty board whose certification process has been recognized as specified in 10 C.F.R. 35.55(a), as adopted by reference in K.A.R. 28-35-264;

(B) a department, NRC, or agreement state license listing the individual as an authorized nuclear pharmacist;

(C) an NRC master materials licensee permit listing the individual as an authorized nuclear pharmacist;

(D) a permit issued by a licensee of broad scope or an NRC master materials permittee or the authorization from a commercial nuclear pharmacy that is authorized to list its own authorized nuclear pharmacist; or

(E) documentation that only accelerator-produced radioactive materials were used in the practice of nuclear pharmacy at a government agency or federally recognized Indian tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date noticed by the NRC as permitted by 10 C.F.R. 35.13(b)(5).

(g) Each licensee shall possess and use instrumentation to measure the radioactivity of radioactive drugs. Each licensee shall have procedures for using the instrumentation. Each licensee shall measure, by direct measurement or by combination of measurements and calculations, the amount of radioactivity in dosages of alpha-, beta-, or photon-emitting radioactive drugs before transfer for commercial distribution. Each licensee shall meet the following requirements:

(1) Perform tests before initial use, periodically, and following repair on each instrument for accuracy, linearity, and geometry dependence, as appropriate for the use of the instrument, and make adjustments if necessary; and

(2) check each instrument for constancy and proper operation at the beginning of each day of use.

(h) Each application from a medical facility, an educational institution, or a federal facility to produce positron emission tomography (PET) radioactive drugs for noncommercial transfer to licensees within the applicant's consortium authorized for medical use under part 6 of these regulations or equivalent agreement state requirements shall include the following:

(1) A request for authorization for the production of PET radionuclides or evidence of an existing license issued under these regulations or equivalent NRC or agreement state requirements for a PET radionuclide production facility within the applicant's consortium from which the applicant receives PET radionuclides;

(2) evidence that the applicant is qualified to produce radioactive drugs for medical use by meeting the requirements of this regulation;

(3) the name of each individual authorized to prepare PET radioactive drugs if the applicant is a pharmacy and documentation that each individual meets the requirements of an authorized nuclear pharmacist; and

(4) the name of each PET radioactive drug for production and noncommercial distribution to the applicant's consortium, including the chemical and physical form of each drug.

(i) Nothing in these regulations shall exempt the licensee from the requirement to comply with applicable FDA requirements and other federal and state requirements governing radioactive drugs. (Authorized by and implementing K.S.A. 48-1607; effective, T-86-37, Dec. 11, 1985; effective May 1, 1986; amended Dec. 30, 2005; amended July 27, 2007; amended March 18, 2011; amended May 4, 2018.)

28-35-192g. Exemptions; exempt quantities. (a) Except as provided in subsections (c) through (e), each person who acquires, possesses, uses, owns, receives, or transfers radioactive material in individual quantities that do not exceed the applicable quantity specified in K.A.R. 28-35-197b shall be exempt from these regulations.

(b) Each person who possesses radioactive material received or acquired before January 1, 1972 under the general license then provided in K.A.R. 28-35-178a shall be exempt from these regulations to the extent that the person possesses, uses, owns, or transfers that radioactive material. This exemption shall not apply to radium-226.

(c) This regulation shall not authorize the production, packaging, ~~or repackaging~~ repackaging, or transfer of radioactive material for purposes of commercial distribution, or the incorporation of radioactive material into products intended for commercial distribution.

(d) No person shall, for purposes of commercial distribution, transfer radioactive material in the individual quantities specified in K.A.R. 28-35-197~~a~~b knowing, or having reason to believe, that those quantities of radioactive material will be transferred to a person exempt under this regulation or an equivalent regulation of the nuclear regulatory commission (NRC) or an agreement state, except in accordance with a specific license issued by the secretary under K.A.R. 28-35-181r, an equivalent regulation of the NRC, or an equivalent regulation of an agreement state.

(e) No person shall, for purposes of producing an increased radiation level, combine quantities of radioactive material covered by this exemption so that the aggregate quantity exceeds the individual quantities specified in K.A.R. 28-35-197b. (Authorized by and

implementing K.S.A. 48-1607; effective, T-86-37, Dec. 11, 1985; effective May 1, 1986; amended March 18, 2011; amended May 4, 2018.)

28-35-197b. Schedule B; exempt quantities of radioactive material. The provisions of 10 C.F.R. 30.71, as in effect on November 30, 2007, are hereby adopted by reference, except that the word "byproduct" shall be replaced with "radioactive." (Authorized by and implementing K.S.A. 48-1607; effective May 4, 2018.)

Editor's Note: this replaces 197a, which was a full copy of the outdated table and is now revoked. A copy of the now-revoked table is below.

28-35-197a. Schedule B; Exempt quantities of radioactive material.

Radioactive Material	Microcuries
Antimony 122 (Sb 122)	100
Antimony 124 (Sb 124)	10
Antimony 125 (Sb 125)	10
Arsenic 73 (As 73)	100
Arsenic 74 (As 74)	10
Arsenic 76 (As 76)	10
Arsenic 77 (As 77)	100
Barium 131 (Ba 131)	10
Barium 133 (Ba 133)	10
Barium 140 (Ba 140)	10
Bismuth 210 (Bi 210)	1
Bromine 82 (Br 82)	10
Cadmium 109 (Cd 109)	10
Cadmium 115m (Cd 115m)	10
Cadmium 115 (Cd 115)	100
Calcium 45 (Ca 45)	10
Calcium 47 (Ca 47)	10
Carbon 14 (C 14)	100
Cerium (Ce 141)	100
Cerium 143 (Ce 143)	100
Cerium 144 (Ce 144)	1
Cesium 129 (Cs 129)	100
Cesium 131 (Cs 131)	1,000
Cesium 134m (Cs 134m)	100
Cesium 134 (Cs 134)	1
Cesium 135 (Cs 135)	10
Cesium 136 (Cs 136)	10
Cesium 137 (Cs 137)	10
Chlorine 36 (Cl 36)	10
Chlorine 38 (Cl 38)	10
Chromium 51 (Cr 51)	1,000
Cobalt (Co 57)	100
Cobalt 58m (Co 58m)	10
Cobalt 58 (Co 58)	10
Cobalt 60 (Co 60)	1
Copper 64 (Cu 64)	100
Dysprosium 165 (Dy 165)	10
Dysprosium 166 (Dy 166)	100
Erbium 169 (Er 169)	100
Erbium 171 (Er 171)	100
Europium 152 9.2 h (Eu 152 9.2 h)	100
Europium 152 13 yr (Eu 152 13 yr)	1
Europium 154 (Eu 154)	1
Europium 155 (Eu 155)	10
Fluroine 18 (F 18)	1,000
Gadolinium 153 (Gd 153)	10
Osmium 191 (Os 191)	100
Osmium 193 (Os 193)	100
Palladium 103 (Pd 103)	100
Palladium 109 (Pd 109)	100
Phosphorous 32 (P 32)	10
Platinum 191 (Pt 191)	100
Platinum 193m (Pt 193m)	100
Platinum 193 (Pt 193)	100
Platinum 197m (Pt 197m)	100
Platinum 197 (Pt 197)	100
Polonium 210 (Po 210)	0.1
Potassium 42 (K 42)	10
Potassium 43 (K 43)	10
Praseodymium 142 (Pr 142)	100
Praseodymium 143 (Pr 143)	100
Promethium 147 (Pm 147)	10
Promethium 149 (Pr 149)	10
Rhenium 186 (Re 186)	100
Rhenium 188 (Re 188)	100
Rhodium 103m (Rh 103m)	100
Rhodium 105 (Rh 105)	100
Rubidium 81 (Rb 81)	10
Rubidium 86 (Rb 86)	10
Rubidium 87 (Rb 87)	10
Ruthenium 97 (Ru 97)	100
Ruthenium 103 (Ru 103)	10
Ruthenium 105 (Ru 105)	10
Ruthenium 106 (Ru 106)	1
Samarium 151 (Sm 151)	10
Samarium 153 (Sm 153)	100
Scandium 46 (Sc 46)	10
Scandium 47 (Sc 47)	100
Scandium 48 (Sc 48)	10
Selenium 75 (Se 75)	75
Silicon 31 (Si 31)	100
Silver 105 (Ag 105)	10
Silver 110m (Ag 110m)	1
Silver 111 (Ag 111)	100
Sodium 22 (Na 22)	10
Sodium 24 (Na 24)	10
Strontium 85 (Sr 85)	10
Strontium 89 (Sr 89)	1
Strontium 90 (Sr 90)	0.1
Strontium 91 (Sr 91)	10
Strontium 92 (Sr 92)	10
Sulphur 35 (S 35)	100
Tantalum 182 (Ta 182)	10
Technetium 96 (Tc 96)	10
Technetium 97m (Tc 97m)	100
Technetium 97 (Tc 97)	100
Technetium 99m (Tc 99m)	100
Technetium 99 (Tc 99)	10
Tellurium 125m (Te 125m)	10
Tellurium 127m (Te 127m)	10
Tellurium 127 (Te 127)	100
Tellurium 129m (Te 129m)	10
Tellurium 129 (Te 129)	100
Tellurium 131m (Te 131m)	10
Tellurium 132 (Te 132)	10
Terbium 160 (Tb 160)	10
Thallium 200 (Tl 200)	100
Thallium 201 (Tl 201)	100
Thallium 202 (Tl 202)	100
Thallium 204 (Tl 204)	10
Thulium 170 (Tm 170)	10
Thulium 171 (Tm 171)	10
Tin 113 (Sn 113)	10
Tin 125 (Sn 125)	10
Tungsten 181 (W 181)	10
Tungsten 185 (W 185)	10
Tungsten 187 (W 187)	100
Vanadium 48 (V 48)	10
Xenon 131m (Xe 131m)	1,000
Xenon 133 (Xe 133)	100
Yttrium 175 (Yb 175)	100
Yttrium 87 (Y 87)	10
Yttrium 90 (Y 90)	10
Yttrium 91 (Y 91)	10
Yttrium 92 (Y 92)	100
Yttrium 93 (Y 93)	100
Zinc 65 (Zn 65)	10
Zinc 69m (Zn 69m)	100
Zinc 69 (Zn 69)	1,000
Zirconium 93 (Zr 93)	10
Zirconium 95 (Zr 95)	10
Zirconium 97 (Zr 97)	10
Any radioactive material not listed above other than alphaemitting radioactive material.....	0.1

(Authorized by and implementing K.S.A. 1984 Supp. 48-1607; effective, T-86-37, Dec. 11, 1985; effective May 1, 1986.)