Kansas Administrative Regulations

Department of Health and Environment

Article 35.—Radiation—Part 1. Definitions.

28-35-135w. Definitions.

As used in these regulations, each of the following terms shall have the meaning assigned in this regulation: (a) "Waste" means any low-level radioactive waste that is acceptable for disposal in a land disposal facility. Low-level radioactive waste shall mean radioactive waste that meets both of the following conditions:

(1) Is not classified as any of the following:

(A) High-level radioactive waste;

(B) spent nuclear fuel;

(C) "byproduct material," as defined in paragraphs (2), (3), and (4) in the definition of "byproduct material" in 10 CFR 20.1003, dated December 1, 2009;

(D) uranium or thorium tailings; and

(E) transuranic waste; and

(2) is classified as low-level radioactive waste consistent with existing law and in accordance with paragraph (a)(1) by the nuclear regulatory commission.

(b) "Waste-handling licensee" means any person licensed to receive and store radioactive wastes before disposal, any person licensed to dispose of radioactive waste, or any person licensed to both receive and dispose of radioactive waste.

(c) "Wedge filter" means an added filter effecting continuous, progressive attenuation of all or part of the useful beam.

(d) "Week" means seven consecutive days, starting on Sunday.

(e) "Weighting factor (w_T) for an organ or tissue (T)" means the proportion of the risk of stochastic effects resulting from irradiation of that organ or tissue to the total risk of stochastic effects when the whole body is irradiated uniformly. For calculating the effective dose equivalent, the values of wT shall be as follows:

ORGAN OR TISSUE DOSE

WEIGHTING FACTORS

Organ or Tissue (T)	w_T
Gonads	0.25
Breast	0.15
Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone surfaces	0.03
Remainder organs	0.30[a]
Whole body	1.00[b]

[a] 0.30 results from 0.06 for each of the five remainder organs that receive the highest doses, excluding the skin and the lens of the eye.

[b] For the purpose of weighting the external whole body dose in determining the total effective dose equivalent, a single weighting factor, $w_T = 1.0$, is specified. The use of other weighting factors for external exposure may be approved by the

secretary if the licensee or registrant demonstrates that the effective dose to be received is within the limits specified in these regulations.

(f) "Well bore" means a drilled hole in which wireline service operations and subsurface tracer studies are performed.

(g) "Well logging" means the lowering and raising of measuring devices or tools that could contain sources of radiation into well bores or cavities for the purpose of obtaining information about the well or adjacent formations.

(h) "Wet-source-change irradiator" means an irradiator whose sources are replaced underwater.

(i) "Wet-source-storage irradiator" means an irradiator whose sources are stored underwater.

(j) "Whole body," for purposes of external exposure, means the head and trunk, including the male gonads, and shall include the arms above the elbow and the legs above the knee.

(k) "Wireline" means a cable containing one or more electrical conductors that is used to raise and lower logging tools in the well bore.

(l) "Wireline service operation" means any evaluation or mechanical service that is performed in the well bore using devices on a wireline.

(m) "Worker" means an individual, contractor, or subcontractor engaged in work that is performed under a license or registration, or both, issued by the department and that is controlled by a licensee or registrant, or both. This term shall not include a specific licensee or registrant.

(n) "Working level (WL)" means any combination of short-lived radon daughters in one liter of air that will result in the ultimate emission of 1.3E+5 MeV of potential alpha particle energy. The short-lived radon daughters are the following:

(1) For radon-222, the following:

(A) Polonium-218;

(B) lead-214;
(C) bismuth-214; and
(D) polonium-214; and
(2) for radon-220, the following:
(A) Polonium-216;
(B) lead-212;
(C) bismuth-212; and
(D) polonium-212.
(o) "Working-level month (WLM)" means an exposure to one working level for 170 hours.
(p) "Written directive" means a written order for a specific patient that is dated and signed by an authorized user before the administration of a radiopharmaceutical or radiation and that contains any of the following sets of information:
(1) For any administration of quantities greater than 1.11 megabecquerels (30 μCi) of sodium iodide I-125 or I-131, the radionuclide and dosage;
(2) for a therapeutic administration of a radiopharmaceutical other than sodium iodide I-125 or I-131, the radiopharmaceutical, dosage, and route of administration;
(3) for gamma stereotactic radiosurgery, the target coordinates, collimator size, plug pattern, and total dose;
(4) for teletherapy, the total dose, dose per fraction, treatment site, and overall treatment period;
(5) for high dose-rate remote afterloading brachytherapy, the radionuclide, treatment site, and total dose; or
(6) for all other brachytherapy, the following information:
(A) Before implantation, the radionuclide, number of sources, and source strengths; and
(B) after implantation but before completion of the procedure, the radionuclide, treatment site, and either the total source strength and exposure time or the total dose.
(Authorized by K.S.A. 48-1607; implementing K.S.A. 48-1603 and 48-1607; effective Dec. 30, 2005; amended March 18, 2011.)

***** Authenticated Kansas Administrative Regulation *****