Kansas Administrative Regulations

Department of Health and Environment

Article 35.—Radiation—Part 4. Standards for Protection Against Radiation.

28-35-212g. Respiratory protection and controls to restrict internal exposure in restricted areas.

(a) Use of process or other engineering controls. The licensee or registrant shall use, to the extent practicable, process or other engineering controls, such as containment or ventilation, to control the concentrations of radioactive material in air.

(b) Use of other controls. When it is not practicable to apply process or other engineering controls to control the concentrations of radioactive material in air to values below those that define an airborne radioactivity area, the licensee or registrant shall, consistent with maintaining the total effective dose equivalent ALARA, increase monitoring and limit intakes by one or more of the following means:

(1) control of access;

(2) limitation of exposure times;

(3) use of respiratory protection equipment; or

(4) other controls.

(c) Use of individual respiratory protection equipment. (1) If the licensee or registrant uses respiratory protection equipment to limit intakes pursuant to K.A.R. 28-35-212g(b), the following conditions shall apply.

(A) Except as provided in K.A.R. 28-35-212g(c)(1)(B), the licensee or registrant shall use only respiratory protection equipment that is tested and certified or had certification extended by the national institute for occupational safety and health and the mine safety and health administration (NIOSH/MSHA).

(B) If the licensee or registrant wishes to use equipment that has not been tested or certified by the NIOSH/MSHA or has not had certification extended by the NIOSH/MSHA, or for which there is no schedule for testing extended by the NIOSH/MSHA, or for which there is no schedule for testing or certification, the licensee

or registrant shall submit an application for authorized use of that equipment, including a demonstration by testing, or a demonstration on the basis of reliable test information, that the material and performance characteristics of the equipment are capable of providing the proposed degree of protection under anticipated conditions of use.

(C) The licensee or registrant shall implement and maintain a respiratory protection program that includes:

(i) air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate exposures;

(ii) surveys and bioassays, as appropriate, to evaluate actual intakes;

(iii) testing of respirators for operability immediately prior to each use;

(iv) written procedures regarding selection, fitting, issuance, maintenance, and testing of respirators, including testing for operability immediately prior to each use; supervision and training of personnel; monitoring, including air sampling and bioassays; and recordkeeping; and

(v) determination by a physician prior to initial fitting of respirators, and at least every 12 months thereafter, that the individual user is physically able to use the respiratory protection equipment.

(D) The licensee or registrant shall issue a written policy statement on respirator usage covering:

(i) the use of process or other engineering controls, instead of respirators;

(ii) routine, nonroutine, and emergency use of respirators; and

(iii) length of periods of respirator use and relief from respirator use.

(E) The licensee or registrant shall advise each respirator user that the user may leave the area at any time for relief from respirator use in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other conditions that might require such relief; and

(F) the licensee or registrant shall use respiratory protection equipment within the equipment manufacturer's expressed limitations for type and mode of use and shall provide proper visual, communication, and other special capabilities, such as adequate skin protection, when needed.

(2) When estimating exposure of individuals to airborne radioactive materials, the licensee or registrant may make allowance for respiratory protection equipment used to limit intakes pursuant to K.A.R. 28-35-212g(b), provided that the following conditions, in addition to those in K.A.R. 28-35-212g(c)(1), are satisfied.

(A) (i) The licensee or registrant shall select respiratory protection equipment that provides a protection factor, specified in appendix A protection factor for registrant published in "Kansas Department of Health and Environment Appendices to Part 4: Standards for Protection Against Radiation," effective April, 1994, greater than the multiple by which peak concentrations of airborne radioactive materials in the working area are expected to exceed the values specified in appendix B, table I, column 3 published in "Kansas Department of Health and Environment Appendixes to Part 4 Standards for Protection Against Radiation," effective April, 1994. However, if the selection of respiratory protection equipment with a protection factor greater than the peak concentration is inconsistent with the goal specified in K.A.R. 28-35-212g(b) of keeping the total effective dose equivalent ALARA, the licensee or registrant may select respiratory protection equipment with a lower protection factor provided that such a selection would result in a total effective dose equivalent that is ALARA.

(ii) The concentration of radioactive material in the air that is inhaled when respirators are worn may be initially estimated by dividing the average concentration in air, during each period of uninterrupted use, by the protection factor. If the exposure is later found to be greater than initially estimated, the corrected value shall be used; if the exposure is later found to be less than initially estimated, the corrected value may be used.

(B) The licensee or registrant shall obtain authorization from the department before assigning respiratory protection factors in excess of those specified in K.A.R. 28-35-232a appendix A. The department may authorize a licensee or registrant to use higher protection factors on receipt of an application that:

(i) describes the situation for which a need exists for higher protection factors; and

(ii) demonstrates that the respiratory protection equipment provides these higher protection factors under the proposed conditions of use.

(3) In an emergency, the licensee or registrant shall use as emergency equipment only respiratory protection equipment that has been specifically certified or had certification extended for emergency use by the NIOSH/MSHA.

(4) The licensee or registrant shall notify the department in writing at least 30 days before the date that respiratory protection equipment is first used pursuant to either K.A.R. 28-35-212g(1) or (2).

(Authorized by and implementing K.S.A. 1993 Supp. 48-1607; effective Oct. 17, 1994.)

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