Kansas Administrative Regulations

Department of Health and Environment

Article 35.—Radiation

28-35-301a. Additional requirements for closed-beam X-ray systems.

(a) X-ray system enclosure. Each registrant shall ensure that each radiation source, sample or object, detector, and analyzing crystal, if used, is enclosed in a chamber or coupled chambers that cannot be entered by any part of the body during normal operation.

(b) Interlocks. Each door and panel accessing an X-ray system shall have an interlock. Each interlock required by this regulation shall be designed with a fail-safe characteristic.

(c) Interlock functions. The enclosure, sample chamber, or other closure shall have an interlock with the X-ray tube high-voltage supply or a shutter in the primary beam, or both, so that no X-ray beam can enter the sample or object chamber while the chamber is open unless the interlock has been conspicuously and deliberately defeated. The interlock required by this regulation shall have fail-safe characteristics or adequate administrative controls and shall be tested to ensure that operations cannot continue without a functioning interlock.

(d) Radiation emission limit. The radiation emission for all closed-beam X-ray systems shall not exceed a dose rate of 0.005 millisieverts (0.5 millirem) in one hour at five centimeters outside any accessible surface.

(e) Security screening units. Each registrant with a security screening unit shall provide each security screening unit with the means to ensure operator presence at the control panel in a position that permits surveillance of the entryways and doors during the generation of X-rays.

(1) During an exposure or preset succession of exposures of one-half second or greater duration, the means provided shall enable the operator to terminate the exposure or preset succession of exposures at any time.

(2) During an exposure or preset succession of exposures of less than one-half second duration, the means provided may allow completion of the exposure in progress but shall enable the operator to prevent additional exposures.

(Authorized by and implementing K.S.A. 48-1607; effective Oct. 23, 2026.)

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