Kansas Administrative Regulations

Department of Health and Environment

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

28-35-216a. Testing for leakage or contamination of sealed sources.

(a) Each licensee in possession of any sealed source shall ensure that all of the following requirements are met:

(1) Each sealed source, except as specified in subsection (b), shall be tested for leakage or contamination, and the test results shall be received before the sealed source is put into use, unless the licensee has a certificate from the transferor indicating that the sealed source was tested within six months before transfer to the licensee.

(2) Each sealed source that is not designed to emit alpha particles shall be tested for leakage or contamination at intervals not to exceed six months or at alternative intervals approved by the secretary, an agreement state, a licensing state, or the nuclear regulatory commission.

(3) Each sealed source designed to emit alpha particles shall be tested for leakage or contamination at intervals not to exceed three months or at alternative intervals approved by the secretary, an agreement state, a licensing state, or the nuclear regulatory commission.

(4) For each sealed source required to be tested for leakage or contamination, whenever there is reason to suspect that the sealed source might have been damaged or might be leaking, the licensee shall ensure that the sealed source is tested for leakage or contamination before further use.

(5) Tests for leakage for all sealed sources shall be capable of detecting the presence at 185 Bq (0.005 μCi) of radioactive material on a test sample. Test samples shall be taken from the sealed source or from the surfaces of the container in which the sealed source is stored or mounted and on which one might expect contamination to accumulate. For a sealed source contained in a device, test samples shall be obtained when the source is in the "off" position.

(b) The following sealed sources shall be exempt from testing for leakage and contamination:

(1) Sealed sources containing only radioactive material with a half-life of fewer than 30 days;

(2) sealed sources containing only radioactive material as a gas;

(3) sealed sources containing 3.7 Mbq (100 μCi) or less of beta-emitting or photon-emitting material or 370 kBq (10 μCi) or less of alpha-emitting material;

(4) sealed sources containing only hydrogen-3;

(5) seeds of iridium-192 encased in nylon ribbon; and

(6) sealed sources, except sources used in radiation therapy, that are stored, are not being used, and are identified as being in storage. The sources exempted from this test shall be tested for leakage before any use or transfer to another person, unless the source has been leak-tested within six months before the date of the use or transfer. The sources in storage shall be physically inventoried every six months and listed in the radioactive materials inventory. Each source in storage shall be tested for leakage at least every 10 years.

(c) Each test for leakage or contamination from sealed sources shall be performed by a person specifically authorized by the secretary, an agreement state, a licensing state, or the nuclear regulatory commission to perform these services.

(d) All test results shall be recorded in units of becquerel or microcurie and maintained for inspection by the department.

(e) If any test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause the source to be decontaminated and repaired or to be disposed of in accordance with these regulations. The licensee shall file a report within five days of the test with the radiation control program, Kansas department of health and environment, describing the equipment involved, the test results, and the corrective action taken. (Authorized by and implementing K.S.A. 48-1607; effective, T-85-43, Dec. 19, 1984; effective May 1, 1985; amended Dec. 30, 2005; amended July 27, 2007; amended March 18, 2011.)

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