Kansas Administrative Regulations

Department of Health and Environment

Article 35.—Radiation—Part 11. Wireline and Subsurface Tracer Studies.

28-35-346. Leak testing of sealed sources.

(a) Requirements. Each licensee using any sealed source of radioactive material shall have the source tested for leakage as specified in subsection (c). A record of leak test results shall be kept in units of microcuries and maintained for inspection by the department. The licensee shall keep the records of the results for three years after the leak test is performed.

(b) Method of testing. Each test for leakage shall be performed only by a person specifically authorized to perform such a test by the department, the nuclear regulatory commission, an agreement state, or a licensing state. The test sample shall be taken from the surface of the source, the source holder, or the surface of the device in which the source is stored or mounted and on which one could expect contamination to accumulate. The test sample shall be analyzed for radioactive contamination. The analysis shall be capable of detecting the presence of 0.005 microcurie (185 Bq) of radioactive material on the test sample and shall be performed by a person specifically authorized to perform such a test by the department, the nuclear regulatory commission, an agreement state, or a licensing state.

(c) Interval of testing. Each sealed source of radioactive material, except an energy compensation source (ECS), shall be tested at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within the six months before the transfer, the sealed source shall not be put into use until tested. If, for any reason, it is suspected that a sealed source could be leaking, the sealed source shall be removed from service immediately and tested for leakage as soon as practical. Each ECS that is not exempt from testing in accordance with subsection (e) shall be tested at intervals not to exceed three years. In the absence of a

certificate from a transferor that a test has been made within the three years before the transfer, the ECS shall not be used until tested.

(d) Leaking or contaminated sources. If the test reveals the presence of 0.005 microcurie (185 Bq) or more of leakage or contamination, the licensee shall immediately withdraw the source from use and shall cause it to be decontaminated, repaired, or disposed of in accordance with these regulations. Each licensee shall check the equipment associated with the leaking source for radioactive contamination and, if contaminated, shall have the equipment decontaminated or disposed of by a nuclear regulatory commission licensee or an agreement state licensee that is authorized to perform these functions. A report describing the equipment involved, the test result, and the corrective action taken shall be filed with the department within five days after receiving the test results.

(e) Exemptions. The following sources shall be exempt from the periodic leak test requirements of this regulation:

(1) Hydrogen-3 (tritium) sources;

(2) sources of radioactive material with a half-life of 30 days or less;

(3) sealed sources of radioactive material in gaseous form;

(4) sources of radioactive material emitting beta, beta-gamma, or gamma radiation, with an activity of not more than 100 microcuries (3.7 Mbq); and

(5) sources of alpha-emitting radioactive material with an activity of not more than 10 microcuries (0.370 MBq).

(Authorized by and implementing K.S.A. 48-1607; effective Sept. 20, 1993; amended Dec. 30, 2005; amended March 18, 2011.)

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