



Ohio Administrative Code

Rule 3701:1-49-07 Leak testing of sealed sources.

Effective: September 1, 2012

(A) Each licensee who uses a sealed source shall have the source tested for leakage. The licensee shall keep a record of leak test results in units of microcuries and retain the record for inspection by the director for three years after the leak test is performed.

(B) The wipe of a sealed source must be performed using a leak test kit or method approved by the director, the United States nuclear regulatory commission or an agreement state. The wipe sample must be taken from the nearest accessible point to the sealed source where contamination might accumulate. The wipe sample must be analyzed for radioactive contamination. The analysis must be capable of detecting the presence of one hundred eighty-five becquerels (0.005 microcurie) of radioactive material on the test sample and must be performed by a person approved by the director, the United States nuclear regulatory commission or an agreement state to perform the analysis.

(C) Sealed sources must be tested at the following frequencies:

(1) Each sealed source (except an energy compensation source (ECS)) must be tested at intervals not to exceed six months. In the absence of a certificate from a transferor that a test has been made within the six months before the transfer, the sealed source may not be used until tested.

(2) Each ECS that is not exempt from testing in accordance with paragraph (E) of this rule must 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 may not be used until tested.

(D) If a sealed source is found to be leaking the licensee shall:

(1) If the test conducted pursuant to paragraphs (A) and (B) of this rule reveals the presence of one hundred eighty-five becquerels (0.005 microcurie) or more of removable radioactive material, the licensee shall remove the sealed source from service immediately and have it decontaminated, repaired, or disposed of by a United States nuclear regulatory commission or agreement state



licensee that is authorized to perform these functions. The licensee shall check the equipment associated with the leaking source for radioactive contamination and, if contaminated, have it decontaminated or disposed of by a United States nuclear regulatory commission or agreement state licensee that is authorized to perform these functions.

(2) The licensee shall submit a report to the director within five days of receiving the test results. The report must describe the equipment involved in the leak, the test results, any contamination which resulted from the leaking source, and the corrective actions taken up to the time the report is made.

(E) The following sealed sources are exempt from the periodic leak test requirements set out in paragraphs (A) to (D) of this rule:

(1) Hydrogen-3 (tritium) sources;

(2) Sources containing licensed material with a half-life of thirty days or less;

(3) Sealed sources containing licensed material in gaseous form;

(4) Sources of beta- or gamma-emitting radioactive material with an activity of 3.7 megabecquerels (one hundred microcuries) or less; and

(5) Sources of alpha- or neutron-emitting radioactive material with an activity of three hundred seventy kilobecquerels (ten microcuries) or less.