**Section 350.1050 Testing for Leakage or Contamination**, **Repair, Tagging, Opening, Modification and Replacement of Sealed Sources**

a) The licensee shall permit only persons specifically authorized by the Agency, the U.S. Nuclear Regulatory Commission, an Agreement State or a Licensing State to:

1) Replace any sealed source fastened to or contained in a radiographic device;

2) Test a sealed source for leakage or contamination; or

3) Repair, tag, open or modify any sealed source.

b) An applicant that desires to conduct its own tests for leakage or contamination shall establish procedures to be followed when testing sealed sources for leakage or contamination and shall submit a description of such procedures to the Agency for approval. The description shall include the:

1) Instrumentation to be used;

2) Method of performing the tests; and

3) Pertinent experience of the individual(s) who will perform the test.

c) Each sealed source shall be tested for leakage or contamination in accordance with 32 Ill. Adm. Code 340.410. In the absence of a certificate from a transferor indicating that a test has been made within the 6-month period prior to the transfer, the sealed source shall not be put into use until tested and the test results confirm that the sealed source is not leaking or contaminated.

d) An acceptable leak test for sealed sources in the possession of a radiography licensee would be to test at the nearest accessible point to the sealed source storage position, or other appropriate measuring point, by a procedure approved pursuant to subsection (b) of this Section. Records of tests for leakage or contamination shall be kept in accordance with 32 Ill. Adm. Code 340.1135.

e) If in accordance with 32 Ill. Adm. Code 340.410 a sealed source is determined to be leaking or contaminated, the licensee shall immediately withdraw the equipment involved from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with 32 Ill. Adm. Code 340. Within 5 days after obtaining results of a test showing a sealed source to be leaking or contaminated, the licensee shall file a report with the Agency in accordance with 32 Ill. Adm. Code 340.1260.

f) A sealed source that is not fastened to or contained in a radiographic exposure device shall have permanently attached to it a durable tag at least 2.54 centimeters (1 inch) square bearing the prescribed radiation caution symbol in conventional colors, magenta or purple on a yellow background, and at least the instructions:

DANGER

RADIOACTIVE MATERIAL

DO NOT HANDLE

NOTIFY CIVIL AUTHORITIES IF FOUND

g) Each exposure device using depleted uranium (DU) shielding and an “S” tube configuration shall be tested for DU contamination at intervals not to exceed 12 months. The analysis shall be capable of detecting the presence of 185 Bq (0.005 μCi) of radioactive material on the test sample, and shall be performed by a person specifically authorized by the Agency, the U.S. Nuclear Regulatory Commission or another Agreement State to perform the analysis. Should the testing reveal the presence of DU contamination, the exposure device shall be removed from use until an evaluation of the wear of the S-tube has been made. Should the evaluation reveal that the S-tube is worn through, the device shall not be used again. DU shielded devices do not have to be tested for DU contamination while not in use and in storage. Before using or transferring the device, however, the device shall be tested for DU contamination, if the interval of storage exceeds 12 months. A record of the DU leak test shall be made and kept in units of becquerel (Bq) or microcurie (μCi) and maintained for inspection by the Agency for 5 years after the records are made or until the source in storage is removed, whichever time interval is longer. Licensees shall be in compliance with the DU leak testing requirement of this subsection beginning October 1, 2004.

(Source: Amended at 28 Ill. Reg. 12598, effective October 1, 2004)