10A NCAC 15 .0702 MANUAL BRACHYTHERAPY

(a) Accountability, storage and transit

(1) Each licensee shall provide accountability of sealed sources and shall keep a record of the issue and return of all sealed sources. A physical inventory shall be made at least quarterly and a written record of the inventory maintained.

(2) When not in use, sealed sources and applicators containing sealed sources shall be kept in a protective enclosure of such material and wall thickness as necessary to assure compliance with the provisions of Rules .1604, .1609 and .1611 of this Chapter.

(b) Testing sealed sources for leakage and contamination

(1) All sealed sources with a half-life greater than 30 days and in any form other than gas shall be tested for leakage and contamination prior to initial use and at intervals not to exceed six months or at other intervals approved by the U.S. Nuclear Regulatory Commission or an Agreement State in the Sealed Source and Device Registry. If there is reason to suspect that a sealed source might have been damaged, or might be leaking, it shall be tested for leakage before further use.

(2) Leak tests shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample, or in the case of radium, the escape of radon at rate of 0.001 microcurie per 24 hours. Any test conducted pursuant to Subparagraph (b)(1) of this Rule which reveals the presence of 0.005 microcurie or more of removable contamination or, in the case of radium, the escape of radon at the rate of 0.001 microcurie or more per 24 hours shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with applicable provisions of Section .1600 of this Chapter. A report describing the sealed sources involved, the test results and the corrective action taken shall be submitted in writing to the agency at the address stated in Rule .0111 of this Chapter within five days after the test.

(3) Leak test results shall be recorded in units of microcuries and maintained for inspection by the agency.

(c) Radiation surveys

(1) Immediately after implanting sources in an individual the licensee shall make a radiation survey of the individual and the area of use to confirm that no source has been misplaced. The licensee shall make a record of each survey.

(2) Immediately after removing the last temporary implant source from an individual, the licensee shall make a radiation survey of the individual with a radiation detection survey instrument to confirm that all sources have been removed. The licensee may not release from confinement for medical care an individual treated by temporary implant until all sources have been removed.

(d) A licensee shall maintain accountability for all brachytherapy sources in storage or in use. After removing sources from an individual, a licensee shall return brachytherapy sources to the storage area. A licensee shall ensure that all sources taken from the storage area have been returned, and shall make a record of the source accountability and retain the record for three years.

(e) For temporary implants, the record shall include:

(1) the number and activity of sources removed from storage;
(2) the date and time the sources were removed from storage;
(3) the name of the individual who removed the sources from storage;
(4) the location of use;
(5) the number and activity of sources returned to storage;
(6) the date and time the sources were returned to storage; and
(7) the name of the individual who returned the sources to storage.

(f) For permanent implants, the record shall include:

(1) the number and activity of sources removed from storage;
(2) the date and time the sources were removed from storage;
(3) The name of the individual who removed the sources from storage;
(4) the number and activity of sources not implanted;
(5) the date the sources were returned to storage; and
(6) the name of the individual who returned the sources to storage.

(g) For each patient or human research subject who is receiving brachytherapy and cannot be released under Rule .0358 of this Section, a licensee shall:

(1) Not quarter the patient or human research subject in the same room as an individual who is not receiving brachytherapy;
(2) Visibly post the patient's or human research subject's room with a "Radioactive Materials" sign; and
(3) Note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or human research subject's room.

(h) A licensee shall have applicable emergency response equipment available near each treatment room to respond to a source;
(1) Dislodged from the patient; or
(2) Lodged within the patient following removal of the source applicators.

(i) A licensee shall notify the Radiation Safety Officer or his or her designee, and an authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.

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