

WAC 246-240-372 Full calibration measurements on remote after-loader units. (1) A licensee authorized to use a remote afterloader unit for medical use shall perform full calibration measurements on each unit:

- (a) Before the first medical use of the unit;
- (b) Before medical use under the following conditions:
 - (i) Following replacement of the source or following reinstallation of the unit in a new location outside the facility; and
 - (ii) Following any repair of the unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and
- (c) At intervals not exceeding one calendar quarter for high dose-rate, medium dose-rate, and pulsed dose-rate remote afterloader units with sources whose half-life exceeds seventy-five days; and
- (d) At intervals not exceeding one year for low dose-rate remote afterloader units.

(2) To satisfy the requirement of subsection (1) of this section, full calibration measurements must include, as applicable, determination of:

- (a) The output within ± 5 percent;
- (b) Source positioning accuracy to within ± 1 millimeter;
- (c) Source retraction with backup battery upon power failure;
- (d) Length of the source transfer tubes;
- (e) Timer accuracy and linearity over the typical range of use;
- (f) Length of the applicators; and
- (g) Function of the source transfer tubes, applicators, and transfer tube-applicator interfaces.

(3) A licensee shall use the dosimetry system described in WAC 246-240-366(1) to measure the output.

(4) A licensee shall make full calibration measurements required by subsection (1) of this section in accordance with published protocols accepted by nationally recognized bodies.

(5) In addition to the requirements for full calibrations for low dose-rate remote afterloader units in subsection (2) of this section, a licensee shall perform an autoradiograph of the source(s) to verify inventory and source(s) arrangement at intervals not exceeding one calendar quarter.

(6) For low dose-rate remote afterloader units, a licensee may use measurements provided by the source manufacturer that are made in accordance with subsections (1) through (5) of this section.

(7) A licensee shall mathematically correct the outputs determined in subsection (2)(a) of this section for physical decay at intervals consistent with one percent physical decay.

(8) Full calibration measurements required by subsection (1) of this section and physical decay corrections required by subsection (7) of this section must be performed by the authorized medical physicist.

(9) A licensee shall retain a record of each calibration in accordance with WAC 246-240-614.

[Statutory Authority: RCW 70.98.050. WSR 06-05-019, § 246-240-372, filed 2/6/06, effective 3/9/06.]