

4731.4474 GAMMA STEREOTACTIC RADIOSURGERY UNITS; PERIODIC SPOT CHECKS.

Subpart 1. **Spot checks required.** A licensee authorized to use gamma stereotactic radiosurgery units for medical use must perform spot checks of each gamma stereotactic radiosurgery facility and on each unit:

- A. monthly;
- B. before the first use of the unit on a given day; and
- C. after each source installation.

Subp. 2. **Written procedures; review.** A licensee must:

A. perform the spot checks required under subpart 1 according to written procedures established by the authorized medical physicist. The authorized medical physicist need not actually perform the spot check measurements; and

B. have the authorized medical physicist review the results of each spot check within 15 days. The authorized medical physicist must notify the licensee as soon as possible in writing of the results of each spot check.

Subp. 3. **Monthly requirements.** To satisfy subpart 1, item A, monthly spot checks must, at a minimum:

A. ensure proper operation of:

(1) the treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off;

(2) helmet microswitches;

(3) emergency timing circuits; and

(4) stereotactic frames and localizing devices (trunnions); and

B. determine:

(1) the output for one typical set of operating conditions measured with the dosimetry system described under part 4731.4468, subpart 2;

(2) the difference between the measurement made in subitem (1) and the anticipated output, expressed as a percentage of the anticipated output, that is, the value obtained at last full calibration corrected mathematically for physical decay;

(3) source output against computer calculation;

(4) timer accuracy and linearity over the range of use;

(5) on-off error; and

(6) trunnion centricity.

Subp. 4. **Other requirements.** To satisfy subpart 1, items B and C, spot checks must ensure proper operation of:

- A. electrical interlocks at each gamma stereotactic radiosurgery room entrance;
- B. source exposure indicator lights on the gamma stereotactic radiosurgery unit, on the control console, and in the facility;
- C. viewing and intercom systems;
- D. timer termination;
- E. radiation monitors used to indicate room exposures; and
- F. emergency off buttons.

Subp. 5. **Repair.** A licensee must arrange for repair of any system identified under subpart 3 that is not operating properly as soon as possible.

Subp. 6. **Malfunctions.** If the results of the checks required under subpart 4 indicate the malfunction of any system, a licensee must lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.

Subp. 7. **Record retention.** A licensee must retain a record of each check required under subparts 3 and 4 and a copy of the procedures required under subpart 2 according to part 4731.4521.

Statutory Authority: *MS s 144.1202; 144.1203*

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