

4732.0900 GENERAL REQUIREMENTS FOR FACILITIES USING ACCELERATORS.

Subpart 1. **Applicability.** Facilities using accelerators must comply with the requirements in this part and other pertinent requirements in this chapter.

Subp. 2. **Operations.**

A. A registrant shall not permit an individual to act as an operator of an accelerator until the individual:

(1) has been instructed in radiation safety and has demonstrated an understanding of radiation safety;

(2) has received copies of and instruction in the applicable requirements of this chapter, the registrant's operating and emergency procedures, and demonstrated an understanding of these requirements and procedures;

(3) has demonstrated competence in the use of the accelerator, related equipment, and the radiation survey instruments employed.

B. In addition to the audit required in part 4732.0535, each operator's performance during an actual accelerator operation must be audited by the radiation safety officer or designee at intervals not to exceed 12 months. If an operator has not participated in an accelerator operation for more than six months since the last audit, the individual's performance must be observed and recorded at the first opportunity the individual participates in an accelerator operation.

C. Records of the audits must be maintained according to part 4732.0330.

D. Operators of accelerators used for industrial radiography must meet the requirements of part 4732.1050.

Subp. 3. **Radiation safety officer duties for accelerator facilities.** In addition to the requirements in part 4732.0505, a radiation safety officer's duties include, but are not limited to, the duties in items A to L. The radiation safety officer must:

A. establish and oversee operating, emergency, and ALARA procedures;

B. review the established procedures regularly to ensure that the procedures are current and conform to this chapter;

C. oversee and approve all phases of the training program for accelerator operators so that appropriate and effective radiation protection practices are taught;

D. ensure that personnel are complying with this chapter and the operating and emergency procedures;

E. ensure that individual monitoring devices are calibrated and used properly;

F. assume control and institute corrective actions including shutdown of operations when necessary in emergency situations or unsafe conditions;

G. ensure that inspection and maintenance programs are performed according to this part and the manufacturer's specifications;

H. ensure that required radiation surveys are performed;

I. document any corrective measures when levels of radiation exceed established limits;

J. ensure that any required interlock switches and warning signals are functioning and that radiation signs, ropes, and barriers are properly posted and positioned;

K. investigate and report to the commissioner each known or suspected case of radiation exposure to an individual or radiation level detected in excess of limits established by this chapter, to determine the cause, and to take steps to prevent its recurrence; and

L. maintain records as required by this chapter.

Subp. 4. **Individual monitoring.** In addition to the requirements of part 4732.0440, individual monitoring devices must be required for all individuals entering any area for which interlocks are required unless:

A. a radiation survey of that area has determined that radiation levels are below that of a high radiation area; and

B. power to an accelerator cannot be activated; or

C. an accelerated beam cannot be directed to the area.

Subp. 5. **Operating and emergency procedures.**

A. Accelerators, when not in operation, must be secured to prevent unauthorized use.

B. Unless otherwise specified in this chapter, all safety and warning devices, including interlocks, must be checked for proper operation at intervals not to exceed three months. Results of these tests must be maintained at the accelerator facility for inspection by the commissioner according to part 4732.0330.

C. The registrant's operating and emergency procedures must include the following:

- (1) operation and safety instructions for the accelerators to be used;
- (2) methods for controlling access to restricted areas;
- (3) methods and occasions for locking and securing the sources of radiation;
- (4) use of individual monitoring equipment;

- (5) steps to be taken in the case of an emergency;
- (6) procedures for notifying proper personnel in the event of an accident;
- (7) inspections and maintenance of the accelerator; and
- (8) maintenance of records according to part 4732.0330.

D. A copy of the current operating and emergency procedures must be maintained at the accelerator control panel.

Subp. 6. **Records.** All records must be kept according to part 4732.0330.

Statutory Authority: *MS s 144.12*

History: *32 SR 777*

Published Electronically: *December 10, 2007*