

4731.6150 CONSTRUCTION MONITORING AND ACCEPTANCE TESTING.

Subpart 1. **Applicability.** This part applies to irradiators whose construction began after July 1, 1993. The requirements of this part must be met prior to loading sources.

Subp. 2. **Panoramic irradiators.** For panoramic irradiators, a licensee must:

A. monitor the construction of the shielding to verify that its construction meets design specifications and generally accepted building code requirements for reinforced concrete;

B. monitor the construction of the foundations to verify that their construction meets design specifications;

C. test the movement of the source racks for proper operation prior to source loading. Testing must include source rack lowering due to simulated loss of power;

D. test the completed access control system to ensure that it functions as designed and that all alarms, controls, and interlocks work properly;

E. test the ability of the heat and smoke detectors to detect a fire, to activate alarms, and to cause the source rack to automatically become fully shielded;

F. test the operability of the fire extinguishing system;

G. demonstrate that the source racks can be returned to their fully shielded positions without off-site power;

H. if a computer system is used to control the access control system, verify that the access control system will operate properly if off-site power is lost and verify that the computer has security features that prevent an irradiator operator from commanding the computer to override the access control system when it is required to be operable; and

I. verify that the electrical wiring and electrical equipment that were installed meet the design specifications.

Subp. 3. **Pool and underwater irradiators.** For pool and underwater irradiators, a licensee must verify:

A. that the pool meets design specifications and must test the integrity of the pool;

B. that outlets and pipes meet the requirements under part 4731.6110, item C;

C. that the water purification system, the conductivity meter, and the water level indicators operate properly;

D. for pool irradiators, the proper operation of the radiation monitors and the related alarm if used to comply with part 4731.6190, subpart 2; and

E. for underwater irradiators, the proper operation of the over-the-pool monitor, alarms, and interlocks required under part 4731.6090, subpart 2.

Subp. 4. **All irradiators.** For all irradiators, a licensee must verify the proper operation of the monitor to detect sources carried on the product conveyor system and the related alarms and interlocks required under part 4731.6090, subpart 1.

Subp. 5. **Irradiators with product conveyor systems.** For all irradiators with product conveyor systems, a licensee must observe and test the operation of the conveyor system to ensure that the requirements under part 4731.6120 are met for protection of the source rack and the mechanism that moves the rack. Testing must include tests of any limit switches and interlocks used to protect the source rack and mechanism that moves the rack from moving product carriers.

Statutory Authority: *MS s 144.1202; 144.1203*

History: *29 SR 755*

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