

3701:1-52-17 Construction monitoring and acceptance testing.

The requirements of this rule must be met for irradiators under construction. The requirements must be met prior to loading sources.

(A) For all irradiators the licensee shall:

- (1) Verify the proper operation of the monitor to detect sources carried on the product conveyor system and the related alarms and interlocks required by paragraph (A) of rule 3701:1-52-11 of the Administrative Code; and
- (2) For all irradiators with product conveyor systems, observe and test the operation of the conveyor system to assure that the requirements in rule 3701:1-52-14 of the Administrative Code 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.

(B) For panoramic irradiators the licensee shall:

- (1) Monitor the construction of the shielding to verify that its construction meets design specifications and generally accepted building code requirements for reinforced concrete;
- (2) Monitor the construction of the foundations to verify that their construction meets design specifications;
- (3) 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;
- (4) Test the completed access control system to assure that it functions as designed and that all alarms, controls, and interlocks work properly;
- (5) 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;
- (6) Test the operability of the fire extinguishing system;
- (7) Demonstrate that the source racks can be returned to their fully shielded positions without offsite power;
- (8) For panoramic irradiators that use a computer system to control the access control system, verify that the access control system will operate properly if offsite 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
- (9) Verify that the electrical wiring and electrical equipment that were installed meet the design specifications.

(C) For pool irradiators the licensee shall:

- (1) Verify that the pool meets design specifications and shall test the integrity of the

pool, and verify that outlets and pipes meet the requirements of paragraph (B) of rule 3701:1-52-13 of the Administrative Code;

- (2) Verify that the water purification system, the conductivity meter, and the water level indicators operate properly;
- (3) Verify the proper operation of the radiation monitors and the related alarm if used to meet paragraph (B) of rule 3701:1-52-22 of the Administrative Code; and
- (4) For underwater irradiators, verify the proper operation of the over-the-pool monitor, alarms, and interlocks required by paragraph (B) of rule 3701:1-52-11 of the Administrative Code.

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Certification

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Date

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