

3701:1-68-01**Definitions.**

(A) Terms defined in this rule are intended to be used within this chapter of the Administrative Code.

(B) As used in this chapter:

(1) "Analytical radiation-generating equipment" means a group or system of components which produce ionizing radiation as either a primary or a secondary result and is used to determine properties of materials being measured or analyzed. Analytical radiation-generating equipment includes, but is not limited to, gauging units, electron microscopes, x-ray diffraction, and spectrometer devices.

(2) "Annual" means at least once a year, not to exceed fourteen months.

(3) "Cabinet irradiation" means irradiation conducted using a cabinet x-ray system.

(4) "Cabinet radiography" means radiography conducted using a cabinet x-ray system.

(5) "Cabinet x-ray system" means an x-ray system with the x-ray tube installed in a shielded enclosure termed a cabinet, such that every location on the exterior of the cabinet meets the dose limits for individual members of the public as specified in rule 3701:1-38-13 of the Administrative Code. A cabinet x-ray system is independent of existing architectural structures except the floor on which it may be placed; is intended to contain at least that portion of a material being irradiated; and must exclude all personnel, including extremities, from its interior during the generation of radiation.

(6) "Calibration" means the determination of the response or reading of an instrument relative to a series of known radiation values over the range of the instrument, or the radiation output of a source of radiation relative to a standard.

(7) "Collimator" means a device or mechanism by which the x-ray beam is restricted in size.

(8) "Control panel" means that part of the radiation-generating equipment used for setting the technique factors.

(9) "Enclosed system" means industrial radiation-generating equipment operated in an enclosure or cabinet and may include, but is not limited to, cabinet radiography, irradiation devices, and other equipment.

(10) "Fail-safe characteristics" means a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon failure of a safety or warning device.

- (11) "Hand-held" means radiation-generating equipment that is specifically designed to be held in the hand during operation.
- (12) "Independent certifying organization" means an independent organization that meets all of the criteria of appendix A to rule 3701:1-68-03 of the Administrative Code.
- (13) "Individual responsible for radiation protection (IRRP)" means an individual designated by the registrant who has the knowledge and responsibility for the overall radiation safety program at the facility, to include the implementation of the daily radiation safety operations and compliance with the rules.
- (14) "Industrial radiation-generating equipment" means any x-ray device other than those used on patients for medical diagnosis or therapy purposes, including, but not limited to, industrial radiography equipment, irradiators, analytical devices, and particle accelerators.
- (15) "Industrial radiographer" means any individual who performs or personally supervises industrial radiographic operations and who is responsible to the registrant for assuring compliance with the requirements of these regulations and certification of registration conditions.
- (16) "Industrial radiographer assistant" means any individual who, under the personal supervision of an industrial radiographer, uses radiation-generating equipment, related equipment, or radiation survey instruments in industrial radiography.
- (17) "Industrial radiography equipment" means radiation-generating equipment which produces ionizing radiation to examine the macroscopic structures of material by nondestructive testing methods.
- (18) "Ionizing radiation" means gamma rays and x-rays, alpha and beta particles, high-speed electrons, neutrons, protons, or other atomic or nuclear particles or rays with sufficient energy to form ions during an interaction with matter, but does not include sound or radiowaves or visible, infrared, or ultraviolet light.
- (19) "Irradiation devices" means radiation-generating equipment used to alter the chemical, biological, or physical properties of materials or to sterilize materials.
- (20) "Kilovoltage peak (kVp)" means the maximum value of the electrical potential difference between the cathode and the anode of the x-ray tube during an exposure.
- (21) "Leakage radiation" means all radiation coming from within the x-ray tube

housing except the useful beam.

- (22) "Local components" means parts of an analytical radiation-generating system and includes areas that are struck by x-rays such as radiation source housings, port and shutter assemblies, collimators, sample holders, cameras, goniometers, detectors, and shielding, but does not include power supplies, transformers, amplifiers, readout devices, and control panels.
- (23) "Locked out and tagged" means a system of equipment security and safety in which radiation-generating equipment, rendered inoperable for storage or because of faulty operation is locked to prevent operation and tagged with specific information as to why it is not to be used. Suggested tag warning, "DO NOT USE - EQUIPMENT NEEDS REPAIR OR CALIBRATION - CONTACT INDIVIDUAL RESPONSIBLE FOR RADIATION PROTECTION PRIOR TO USE."
- (24) "Nondestructive testing (NDT)" means the development and application of technical methods to examine materials or components in ways that do not impair future usefulness and serviceability in order to detect, locate, measure and evaluate flaws; to assess integrity, properties and composition; and to measure geometrical characteristics.
- (25) "Open-beam" means analytical radiation-generating equipment in which an individual could place any part of his or her body in the primary beam during normal operation.
- (26) "Particle accelerator" means a system of components which produce particles that are used to determine or alter properties of materials being measured, modified or analyzed.
- (27) "Permanent radiographic installation" means an enclosed shielded room, cell, or vault, not located at a temporary jobsite, in which industrial radiography is performed. Permanent radiographic installation includes a cabinet x-ray system used for industrial radiography that is large enough to walk into.
- (28) "Quality assurance program" means a program providing for verification by written procedures such as testing, auditing, and inspection to ensure that deficiencies, deviations, defective equipment, or unsafe practices, or a combination thereof, relating to the use, disposal, management, or manufacture of radiation devices are identified, promptly corrected, and reported to the appropriate regulatory authorities.
- (29) "Radiation worker" means an individual engaged in activities registered by the department and controlled by the registrant, but does not include the registrant.
- (30) "Shutter" means a device, fixed to any industrial radiation-generating

equipment housing to intercept the useful beam.

(31) "Temporary jobsite" means a location where radiographic operations are performed and where sources of radiation may be stored other than the locations of use authorized on the registration.

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