PART E

RADIATION SAFETY REQUIREMENTS FOR INDUSTRIAL RADIOGRAPHIC OPERATIONS

Sec. E.1 Purpose. The regulations in this Part establish radiation safety requirements for using sources of radiation for industrial radiography. The requirements of this Part are in addition to, and not in substitution for, other applicable requirements of the regulations.

Sec. E.2 Scope. The regulations in this Part apply to all licensees or registrants who use sources of radiation for industrial radiography. Except for those regulations of this Part clearly applicable only to sealed radioactive sources, both radiation machines and sealed radioactive sources are covered by this Part.

Sec. E.3 Definitions. As used in this Part, the following definitions apply:

"Cabinet radiography" means industrial radiography conducted in an enclosure or cabinet shielded so that radiation levels at every location on the exterior meet the limitations specified in Section D.301 of the regulations.

"Cabinet x-ray system" means an x-ray system with the x-ray tube installed in an enclosure independent of existing architectural structures except the floor on which it may be placed. The cabinet x-ray system is intended to contain at least that portion of a material being irradiated, provide radiation attenuation, and exclude personnel from its interior during generation of radiation. Included are all x-ray systems designed primarily for the inspection of carry-on baggage at airline, railroad, and bus terminals, and in similar facilities. An x-ray tube used within a shielded part of a building, or x-ray equipment which may temporarily or occasionally incorporate portable shielding, is not considered a cabinet x-ray system.

"Certified cabinet x-ray system" means an x-ray system which has been certified in accordance with 21 CFR 1010.2 as being manufactured and assembled pursuant to the provisions of 21 CFR 1020.40.

"Shielded-room radiography" means industrial radiography conducted in a room shielded so that radiation levels at every location on the exterior meet the limitations specified in Section D.301 of the regulations.

"Collimator" means a device used to limit the size, shape, and direction of the primary radiation beam.

"Industrial radiography" means the examination of the macroscopic structure of materials by nondestructive methods using sources of ionizing radiation to produce radiographic images.

“Industrial Technician” means any individual recognized by the Radiation Safety Officer who uses a source of radiation, tools or radiation survey instruments in industry.

"Lixiscope" means a portable light-intensified imaging device using a sealed source.

"Permanent radiographic installation" means an installation or structure designed or intended for radiography and in which radiography is regularly performed.

"Personal supervision" means guidance and instruction provided to a radiographer trainee by a radiographer instructor who is present at the site, in visual contact with the trainee while the trainee is using sources of radiation, and in such proximity that immediate assistance can be given if required.

"Radiographer" means any individual who performs or personally supervises industrial radiographic operations and who is responsible to the licensee or registrant for assuring compliance with the requirements of the regulations and all license and/or certificate of registration conditions.

"Radiographer instructor" means any radiographer who has been authorized by the Agency to provide on-the-job training to radiographer trainees in accordance with Subparagraph E.201b.ii.

"Radiographer trainee" means any individual who, under the personal supervision of a radiographer instructor, uses sources of radiation, related handling tools, or radiation survey instruments during the course of his instruction.

"Radiographic exposure device" means any instrument containing a sealed source fastened or contained therein, in which the sealed source or shielding thereof may be moved, or otherwise changed, from a shielded to unshielded position for purposes of making a radiographic exposure.

"Radiographic personnel" means any radiographer, radiographer instructor, or radiographer trainee.

"Residential location" means any area where structures in which people lodge or live are located, and the grounds on which such structures are located including, but not limited to, houses, apartments, condominiums, and garages.

"Shielded position" means the location within the radiographic exposure device or storage container which, by manufacturer's design, is the proper location for storage of the sealed source.

"Source changer" means a device designed and used for replacement of sealed sources in radiographic exposure devices, including those source changers also used for transporting and storage of sealed sources.

"Storage area" means any location, facility, or vehicle which is used to store, to transport, or to secure a radiographic exposure device, a storage container, or a sealed source when it is not in use and which is locked or has a physical barrier to prevent accidental exposure, tampering with, or unauthorized removal of the device, container, or source.

"Storage container" means a shielded device in which sealed sources are secured and stored.

"Temporary job site" means any location where industrial radiography is performed other than the location(s) listed in a specific license or permit.

"Transport container" means a package that is designed to provide radiation safety and security when sealed sources are transported and which meets all applicable requirements of the U.S. Department of Transportation.

Sec. E.4 Exemptions

a. Except for the requirements of Paragraph E.306b. and c., certified cabinet x-ray systems designed to exclude individuals from the interior of the cabinet are exempt from the requirements of this Part.

b. Industrial uses of lixiscopes are exempt from the requirements in this Part.

Equipment Control

Sec. E.101 Limits on Levels of Radiation for Radiographic Exposure Devices and Storage Containers. Radiographic exposure devices measuring less than 4 inches (10 cm) from the sealed source storage position to any exterior surface of the device shall have no radiation level in excess of 50 milliroentgens (1.29×10^{-5} C/kg) per hour at 6 inches (15 cm) from any exterior surface of the device. Radiographic exposure devices measuring a minimum of 4 inches (10 cm) from the sealed source storage position to any exterior surface of the device, and all storage containers for sealed sources or outer containers for radiographic exposure devices, shall have no radiation level in excess of 200 milliroentgens (5.16×10^{-5} C/kg) per hour at any exterior surface, and 10 milliroentgens (2.58×10^{-6} C/kg) per hour at 39.4 inches (1 m) from any exterior surface. The radiation levels specified are with the sealed source in the shielded position.

Sec. E.102 Locking of Sources of Radiation

a. Each source of radiation shall be provided with a lock or lockable outer container designed to prevent unauthorized or accidental production of radiation or removal or exposure of a sealed source and shall be kept locked at all times except when under the direct surveillance of a radiographer or radiographer trainee, or as may be otherwise authorized pursuant to Section E.301. Each storage container and source changer likewise shall be provided with a lock and shall be kept locked when containing sealed sources except when the container is under the direct surveillance of a radiographer or radiographer trainee.

b. Radiographic exposure devices, source changers, and storage containers, prior to being moved from one location to another and also prior to being secured at a given location, shall be locked and surveyed to assure that the sealed source is in the shielded position.

c. The sealed source shall be secured in its shielded position by locking the exposure device or securing the remote control each time the sealed source is returned to its shielded position. Then a survey shall be performed to determine that the sealed source is in the shielded position pursuant to Paragraph E.303b.

Sec. E.103 Storage Precautions

a. Locked radiographic exposure devices, source changers, storage containers, and radiation machines shall be physically secured to prevent tampering or removal by unauthorized personnel.

b. Radiographic exposure devices, source changers, or transport containers that contain radioactive material shall not be stored in residential locations. This requirement does not apply to storage of radioactive material in a vehicle in transit for use at temporary job sites, if the licensee complies with Paragraph E.103c., and if the vehicle does not constitute a permanent storage location as described in Paragraph E.103d.

c. If a vehicle is to be used for storage of radioactive material, a vehicle survey shall be performed after securing radioactive material in the vehicle and before transport to ensure that radiation levels do not exceed the limits specified in Paragraph D.105a. of the regulations at the exterior surface of the vehicle.

d. A storage or use location is permanent if radioactive material is stored at the location for more than 90 days and any one or more of the following applies to the location:

    i. Telephone service is established by the licensee;

    ii. Industrial radiographic services are advertised for or from the location;

    iii. Industrial radiographic operations are conducted at other sites due to arrangements made from the location.

Sec. E.104 Radiation Survey Instruments

a. The licensee or registrant shall maintain sufficient calibrated and operable radiation survey instruments to make physical radiation surveys as required by this Part and Section D.201 of the regulations. Instrumentation required by this Section shall have a range such that 2 milliroentgens (5.16×10^{-7} C/kg) per hour through 1 roentgen (2.58×10^{-4} C/kg) per hour can be measured.

b. Each radiation survey instrument shall be calibrated:

    i. at energies appropriate for use and at intervals not to exceed 3 months and after each instrument servicing;

    ii. such that accuracy within plus or minus 20 percent can be demonstrated; and

    iii. at 2 points located approximately 1/3 and 2/3 of full-scale on each scale for linear scale instruments; at midrange of each decade, and at 2 points of at least 1 decade for logarithmic scale instruments; and at appropriate points for digital instruments.

c. Records of these calibrations shall be maintained for 2 years after the calibration date for inspection by the Agency.

d. Each radiation survey instrument shall be checked with a radiation source at the beginning of each day of use and at the beginning of each work shift to ensure it is operating properly.

Sec. E.105 Leak Testing, Repair, Tagging, Opening, Modification, and Replacement of Sealed Sources

a. The replacement of any sealed source fastened to or contained in a radiographic exposure device and leak testing, repair, tagging, opening, or any other modification of any sealed source shall be performed only by persons specifically authorized to do so by the Agency, the U.S. Nuclear Regulatory Commission (NRC), or an Agreement State.

b. Each sealed source shall be tested for leakage at intervals not to exceed 6 months. In the absence of a certificate from a transferor indicating that a test has been made within the 6-month period prior to the transfer, the sealed source shall not be put into use until tested.

c. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 Bq) of removable contamination on the sealed source. An~~y~~ acceptable leak test for sealed sources in the possession of a radiography licensee would be to test at the nearest accessible point to the sealed source storage position, or other appropriate measuring point, by a procedure to be approved pursuant to Subparagraph C.26c.v.(2) of the regulations. Records of leak test results shall be kept in units of microcuries (becquerels) and maintained for inspection by the Agency for 6 months after the next required leak test is performed or until the sealed source is transferred or disposed.

d. Any test conducted pursuant to Paragraphs E.105b. and c. which reveals the presence of 0.005 microcurie (185 Bq) or more of removable radioactive material shall be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the equipment involved from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with regulations of the Agency. Within 5 days after obtaining results of the test, the licensee shall file a report with the Agency describing the equipment involved, the test results, and the corrective action taken.

e. Each radiographic exposure device shall have permanently attached to it a durable label which has, as a minimum, the instruction: "Danger - Radioactive Material - Do Not Handle - Notify Civil Authorities if Found."

Sec. E.106 Quarterly Inventory. Each licensee shall conduct a quarterly physical inventory to account for all sealed sources and radiography exposure devices received or possessed by him. The records of the inventories shall be maintained for 2 years from the date of the inventory for inspection by the Agency and shall include the quantities and kinds of radioactive material, the location of sealed sources, the name of the individual making the inventory, the manufacturer, the model number, and the serial number.

Sec. E.107 Utilization Logs. Each licensee or registrant shall maintain current logs which shall be kept available for inspection by the Agency for 2 years from the date of the recorded event, showing for each source of radiation the following information:

a. a unique identification, such as a serial number, of each radiation machine, each radiographic exposure device in which a sealed source is located, and each sealed source;

b. the identity of the radiographer to whom assigned;

c. locations where used and dates of use; and

d. the date(s) each source of radiation is removed from storage and returned to storage.

Sec. E.108 Inspection and Maintenance

a. Each licensee or registrant shall ensure that checks for obvious defects in radiation machines, radiographic exposure devices, storage containers, and source changers are performed prior to each day or shift of use.

b. Each licensee or registrant shall conduct a program of at least quarterly inspection and maintenance of radiation machines, radiographic exposure devices, storage containers, and source changers to assure proper functioning of components important to safety. All appropriate parts shall be maintained in accordance with manufacturer's specifications. Records of inspection and maintenance shall be maintained for inspection by the Agency for 2 years from the date of the recorded event.

c. If any inspection conducted pursuant to Paragraphs E.108a. or b. reveals damage to components critical to radiation safety, the device shall be removed from service and labeled as defective until repairs have been made.

Sec. E.109 Permanent Radiographic Installations. Permanent radiographic installations having high radiation area entrance controls of the type described in Subdivisions D.601, 602 and 603 of the regulations shall also meet the following requirements:

a. Each entrance that is used for personnel access to the high radiation area shall have both visible and audible warning signals to warn of the presence of radiation. The visible signal shall be activated by radiation. The audible signal shall be activated when an attempt is made to enter the installation while the source is exposed.

b. The control device or alarm system shall be tested for proper operation at the beginning of each day of equipment use. If a control device or alarm system is operating improperly, it shall be immediately labeled as defective and repaired before industrial radiographic operations are resumed. Records of these tests shall be maintained for inspection by the Agency for 2 years from the date of the event.

Personal Radiation Safety Requirements for Radiographic Personnel

Sec. E.201 Training and Testing

a. No licensee or registrant shall permit any individual to act as a radiographer trainee or industrial trainee unless such individual has received copies of, instructions in, and has demonstrated an understanding of:

i. the subjects outlined in Appendix A of this Part,

ii. the regulations contained in this Part and the applicable Sections of Parts D and T of the regulations,

iii. the appropriate license or certificate of registration; and

iv. the licensee's or registrant's operating and emergency procedures.

b. No licensee or registrant shall permit any individual to act as a radiographer, as defined in this Part, until such individual:

i. has met the requirements of Paragraph E.201a.;

ii. has provided the Agency with documentation on Agency Form R or equivalent showing completion of at least 30 days of on-the-job training by a radiographer instructor as a radiographer trainee following completion of the requirements of Paragraph E.201a.;

iii. has demonstrated competence in the use of sources of radiation, radiographic exposure devices, related handling tools, and radiation survey instruments which may be employed in industrial radiographic assignments; and

iv. has demonstrated an understanding of the instructions in Paragraph E.201a. by successful completion of a written test and a field examination on the subjects covered.

v. has successfully completed an examination administered by the Agency or has successfully completed a training program acceptable to the Agency (an example of an appropriate training syllabus is given in Appendix A) or ASNT certified personnel will be acceptable to the Agency.

c. Records of the above training, including copies of written tests and dates of oral tests and field examinations, shall be maintained by the licensee or registrant for inspection by the Agency for 3 years following termination of employment.

d. Each licensee or registrant shall conduct an internal audit program to ensure that the Agency's radioactive material license conditions and the licensee's or registrant's operating and emergency procedures are followed by each radiographer. These internal audits shall be performed at least quarterly, and each radiographer shall be audited at least quarterly. Records of internal audits shall be maintained for inspection by the Agency for 2 years from the date of the audit.

Sec. E.202 Operating and Emergency Procedures. The licensee's or registrant's operating and emergency procedures shall include instructions in at least the following:

a. handling and use of sources of radiation to be employed such that no individual is likely to be exposed to radiation doses in excess of the limits established in Part D of the regulations;

b. methods and occasions for conducting radiation surveys;

c. methods for controlling access to radiographic areas;

d. methods and occasions for locking and securing sources of radiation;

e. personnel monitoring and the use of personnel monitoring equipment, including steps that must be taken immediately by radiography personnel in the event a pocket dosimeter is found to be off-scale;

f. transportation to field locations, including packing of sources of radiation in the vehicles, posting of vehicles, and control of sources of radiation during transportation;

g. minimizing exposure of individuals in the event of an accident;

h. the procedure for notifying proper personnel in the event of an accident;

i. maintenance of records; and

j. the inspection and maintenance of radiographic exposure devices, source changers, storage containers, and radiation machines.

Sec. E.203 Personnel Monitoring Control

a. The licensee or registrant shall not permit any individual to act as a radiographer or as a radiographer trainee unless, at all times during radiographic operations, each such individual wears a direct reading pocket dosimeter and either a film badge or a thermoluminescent dosimeter (TLD). Pocket dosimeters shall have a range from zero to 200 milliroentgens (5.16×10^{-5} C/kg) and shall be recharged daily or at the start of each shift. Each film badge or TLD shall be assigned to and worn by only one individual.

b. Pocket dosimeters shall be read and exposures recorded at least once daily.

c. Pocket dosimeters shall be checked for correct response to radiation at periods not to exceed 1 year. Acceptable dosimeters shall read within plus or minus 30 percent of the true radiation exposure. Records of this check shall be maintained for inspection by the Agency for 2 years from the date of the event.

d. If an individual's pocket dosimeter is discharged beyond its range, industrial radiographic operations by that individual shall cease and the individual's film badge or TLD shall be processed immediately. The individual shall not return to work with sources of radiation until a determination of the radiation exposure has been made.

e. Reports received from the film badge or TLD processor and records of daily pocket dosimeter readings shall be kept for inspection by the Agency until the Agency authorizes disposition.

f. If a film badge or TLD is lost or damaged, the worker shall cease work immediately until a replacement film badge or TLD is provided and the exposure is calculated for the time period from issuance to loss or damage of the film badge or TLD.

Sec. E.204 Supervision of Radiographer Trainee. Whenever a radiographer trainee uses radiographic exposure devices, sealed sources or related source handling tools, or conducts radiation surveys required by Paragraphs E.303b. and c. to determine that the sealed source has returned to the shielded position after an exposure, the radiographer trainee shall be under the personal supervision of a radiographer instructor.

Precautionary Procedures in Radiographic Operations

Sec. E.301 Security. During each radiographic operation, the radiographer, radiographer instructor or radiographer trainee shall maintain a direct surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in Part A of the regulations, except:

a. where the high radiation area is equipped with a control device or alarm system as described in Subparagraph 603.B.ii of the regulations, or

b. where the high radiation area is locked to protect against unauthorized or accidental entry.

Sec. E.302 Posting. Notwithstanding any provisions in Paragraph D.903a of the regulations, areas in which radiography is being performed shall be conspicuously posted as required by Paragraph D.902a and b of the regulations.

Sec. E.303 Radiation Surveys and Survey Records

a. No radiographic operation shall be conducted unless calibrated and operable radiation survey instrumentation, as described in Section E.104, is available and used at each site where radiographic exposures are made.

b. A survey with a radiation survey instrument shall be made after each radiographic exposure to determine that the sealed source has been returned to its shielded position. The entire circumference of the radiographic exposure device shall be surveyed. If the radiographic exposure device has a source guide tube, the survey shall also include the entire length of the guide tube.

c. A survey shall be made of the storage area as defined in Section E.3 whenever a radiographic exposure device is being placed in storage.

d. A physical radiation survey, as specified in Section E.102, shall be made to determine that each sealed source is in its shielded position prior to securing the radiographic exposure device, storage container, or source changer in a storage area as defined in Section E.3.

e. A physical radiation survey shall be made after each radiographic exposure using radiation machines to determine that the machine is "off".

f. Records shall be kept of the surveys required by Paragraphs E.303c. and d. Such records shall be maintained for inspection by the Agency for 2 years after completion of the survey. If the survey was used to determine an individual's exposure, however, the records of the survey shall be maintained until the Agency authorizes their disposition.

Sec. E.304 Documents and Records Required at Temporary Jobsites. Each licensee or registrant conducting industrial radiography at a temporary jobsite shall have the following records available at that site for inspection by the Agency:

a. appropriate license or certificate of registration or equivalent document;

b. operating and emergency procedures;

c. applicable regulations;

d. survey records required pursuant to Section E.303 and area survey records required pursuant to Paragraph D.1103 of the regulations for the period of operation at the site;

e. daily pocket dosimeter records for the period of operation at the site; and

f. the latest instrument calibration and leak test records for specific devices and sealed sources in use at the site. Acceptable records include tags or labels which are affixed to the device or survey meter.

Sec. E.305 Specific Requirements for Radiographic Personnel Performing Industrial Radiography

a. At a jobsite, the following shall be supplied by the licensee or registrant:

   i. at least one operable, calibrated survey instrument;

   ii. a current whole body personnel monitor (TLD or film badge) for each individual;

   iii. an operable, calibrated pocket dosimeter with a range of 0 to 200 milliroentgens (5.16×10^{-5} C/kg) for each worker; and

   iv. the appropriate barrier ropes and signs.

b. Industrial radiographic operations shall not be performed if any of the items in Paragraph E.305a. are not available at the jobsite or are inoperable.

c. Each licensee or registrant shall provide as a minimum two radiographic personnel when sources of radiation are used at temporary jobsites. If one of the personnel is a radiographer trainee, the other shall be a radiographer instructor.

d. No individual other than a radiographer or a radiographer trainee who is under the personal supervision of a radiographer instructor shall manipulate controls or operate equipment used in industrial radiographic operations.

e. No individual shall act as a radiographer instructor unless such individual:

i. has met the requirements of Paragraph E.201b.;

ii. has 1 year of documented experience as a radiographer; and

iii. has been named as a radiographer instructor on the license or registration certificate issued by the Agency.

f. During an inspection by the Agency, the Agency inspector may terminate an operation if any of the items in Paragraph E.305a. are not available and operable or if the required number of radiographic personnel are not present. Operations shall not be resumed until such conditions are met.

Sec. E.306 Special Requirements and Exemptions for Cabinet Radiography

a. Systems for cabinet radiography designed to allow admittance of individuals shall:

i. Comply with all applicable requirements of this Part and Section D.301 of the regulations. If such a system is a certified cabinet x-ray system, it shall comply with all applicable requirements of this Part and 21 CFR 1020.40.

ii. Be evaluated at intervals not to exceed 1 year to assure compliance with the applicable requirements as specified in Subparagraph E.306a.i. Records of these evaluations shall be maintained for inspection by the Agency for a period of 2 years after the evaluation.

b. Certified cabinet x-ray systems designed to exclude individuals from the interior of the cabinet are exempt from the requirements of this Part except that:

i. Operating personnel must be provided with either a film badge or a thermoluminescent dosimeter, and reports of the results shall be maintained for inspection by the Agency.

ii. No registrant shall permit any individual to operate a cabinet x-ray system until such individual has received a copy of and instruction in the operating procedures for the unit and has demonstrated competence in its use. Records which demonstrate compliance with this subparagraph shall be maintained for inspection by the Agency until disposition is authorized by the Agency.

iii. Tests for proper operation of high radiation area control devices or alarm systems, where applicable, shall be conducted, recorded, and maintained in accordance with Section E.109.

iv. The registrant shall perform an evaluation, at intervals not to exceed 1 year, to determine conformance with Section D.301 of the regulations. If such a system is a certified cabinet x-ray system, it shall be evaluated at intervals not to exceed 1 year to determine conformance with 21 CFR 1020.40. Records of these evaluations shall be maintained for inspection by the Agency for a period of 2 years after the evaluation.

c. Certified cabinet x-ray systems shall be maintained in compliance with 21 CFR 1020.40 unless prior approval has been granted by the Agency pursuant to Paragraph A.3a. of the regulations.

Sec. E.307 Prohibitions. Industrial radiography performed with a sealed source which is not fastened to or contained in a radiographic exposure device, known as fishpole radiography, is prohibited unless specifically authorized in a license issued by the Agency.

PART E

APPENDIX A

SUBJECTS FOR INSTRUCTION OF INDUSTRIAL RADIOGRAPHER TRAINEES

Training provided to qualify individuals as radiographer trainees in compliance with Paragraph E.201a. shall be presented on a formal basis. The training shall include the following subjects:

I. Fundamentals of Radiation Safety

- A. Characteristics of radiation
- B. Units of radiation dose and quantity of radioactivity
- C. Significance of radiation dose
  - 1. Radiation protection standards
  - 2. Biological effects of radiation
  - 3. Case histories of radiography accidents
- D. Levels of radiation from sources of radiation
- E. Methods of controlling radiation dose
  - 1. Working time
  - 2. Working distances
  - 3. Shielding

II. Radiation Detection Instrumentation to be Used

- A. Use of radiation survey instruments
  - 1. Operation
  - 2. Calibration
  - 3. Limitations
- B. Survey techniques
- C. Use of personnel monitoring equipment
  - 1. Film badges
  - 2. Thermoluminescent dosimeters (TLD's)
  - 3. Pocket dosimeters

III. The Requirements of Pertinent Federal and State Regulations

- A. Title 10 Code of Federal Regulations
- B. Delaware Radiation Control Regulations

IV. The Licensee's or Registrant's Written Operating and Emergency Procedures

The licensee’s or registrant’s operating, safety, and emergency procedures shall include instructions in at least the following:

A. Handling and use of sources of radiation for industrial radiography such that no individual is likely to be exposed to radiation doses that exceed the limits established in Part D of these rules;
B. Methods and occasions for conducting radiation surveys, including lock-out survey requirements;
C. Methods for controlling access to industrial radiography areas;
D. Methods and occasions for locking and securing sources of radiation;
E. Personnel monitoring and the use of personnel monitoring equipment, including steps to be taken immediately by industrial radiographic personnel in the event a pocket dosimeter is found to be off-scale [E.203(d)];
F. Methods of transporting equipment to field locations, including packing of sources of radiation in the vehicles, placarding of vehicles, and controlling of sources of radiation during transportation (including applicable U.S. Department of Transportation requirements);
G. Methods or procedures for minimizing exposure of individuals in the event of an accident, including procedures for a disconnect accident, a transportation accident, and loss of a sealed source;
H. Procedures for notifying proper personnel in the event of an accident;
I. Specific posting requirements;
J. Maintenance of records [E.303(f)];
K. Inspection and maintenance of radiographic exposure devices, source changers, storage containers, transport containers, source guide tubes, crank-out devices, and radiation machines; and
L. Method of testing and training in accordance with E.201.

V. Radiographic Equipment to be Used

A. Remote handling equipment
B. Operation and control of radiographic exposure devices and sealed sources, including pictures or models of source assemblies (pigtails)
C. Storage and transport containers, source changers
D. Operation and control of x-ray equipment
E. Collimators