Safety Requirements for Radiographic Equipment-Part 34

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Change to NRC Section	Title	State Section	Compatibility Category	Summary of Change to CFR	Difference Yes/No	Significant Yes/No	If Difference, Why or Why Not Was a Comment Generated
§34.20	Performance requirements for radiography equipment		B	**A new § 34.20 Is added under the Equipment Control heading in subpart B to read as follows:** a)(1) Each radiographic exposure device, source assembly or sealed source, and all associated equipment must meet the requirements specified in American National Standards Institute, N432–1980 "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography," (published as NBS Handbook 136, issued January 1981). This publication has been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a)and 1 CFR part 51. This publication may be purchased from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018 Telephone (212) 642–4900. Copies of the document are available for inspection at the Nuclear Regulatory Commission Library, 11545 Rockville Pike, Rockville, Maryland 20852. A copy of the document is also on file at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. (b) In addition to the requirements			

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				specified in paragraph (a) of this section, the following requirements apply to radiographic exposure devices, source changers, source assemblies and sealed sources. 1. (1) The licensee shall ensure that each radiographic exposure device has attached to it a durable, legible, clearly visible label bearing the— (i) Chemical symbol and mass number of the radionuclide in the device; (ii) Activity and the date on which this activity was last measured; (iii) Model (or product code) and serial number of the sealed source; (iv) Manufacturer's identity of the sealed source; and (v) Licensee's name, address, and telephone number. (2) Radiographic exposure devices intended for use as Type B transport containers must meet the applicable requirements of 10 CFR part 71. (3) Modification of radiographic exposure devices, source changers, and source assemblies and associated equipment is prohibited, unless the design of any replacement component,including source holder, source assembly, controls or guide tubes would not compromise the design safety features of the system.			

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				(c) In addition to the requirements specified in paragraphs (a) and (b) of this section, the following requirements apply to radiographic exposure devices, source assemblies, and associated equipment that allow the source to be moved out of the device for radiographic operations or to source changers. (1) The coupling between the source assembly and the control cable must be designed in such a manner that the source assembly will not become disconnected if cranked outside the guide tube. The coupling must be such that it cannot be unintentionally disconnected under normal and reasonably foreseeable abnormal conditions. (2) The device must automatically secure the source assembly when it is cranked back into the fully shielded position within the device. This securing system may only be released by means of a deliberate operation on the exposure device. (3) The outlet fittings, lock box, and drive cable fittings on each radiographic exposure device must be equipped with safety plugs or covers which must be installed during storage and transportation to protect the source assembly from water, mud, sand or other foreign matter. (4)(i) Each sealed source or source assembly must have attached to it or engraved on it, a durable, legible, visible label with the words:			

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				"DANGER—RADIOACTIVE." (ii) The label may not interfere with the safe operation of the exposure device or associated equipment. (5) The guide tube must be able to withstand a crushing test that closely approximates the crushing forces that are likely to be encountered during use, and be able to withstand a kinking resistance test that closely approximates the kinking forces that are likely to be encountered during use. (6) Guide tubes must be used when moving the source out of the device. (7) An exposure head or similar device designed to prevent the source assembly from passing out of the end of the guide tube must be attached to the outermost end of the guide tube during industrial radiography operations. (8) The guide tube exposure head connection must be able to withstand the tensile test for control units specified in ANSI N432–1980. (9) Source changers must provide a system for ensuring that the source will not be accidentally withdrawn from the changer when connecting or disconnecting the drive cable to or from a source assembly. (d) All radiographic exposure devices and associated equipment in use after January 10, 1996, must comply with the			

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				requirements of this section. (e) Notwithstanding paragraph (a)(1) of this section, equipment used in industrial radiographic operations need not comply with §8.9.2(c) of the Endurance Test in American National Standards Institute N432–1980, if the prototype equipment has been tested using a torque value representative of the torque that an individual using the radiography equipment can realistically exert on the lever or crankshaft of the drive mechanism.			
§34.20 (a)(2)	Performance requirements for radiography equipment		D	Engineering analysis may be submitted by an applicant or licensee to demonstrate the applicability of previously performed testing on similar individual radiography equipment components. Upon review, the Commission may find this an acceptable alternative to actual testing of the component pursuant to the above referenced standard.	N/A		
§34.21	Limit on levels of radiation for radiographic exposure devices and storage containers		B	NOTE: **This paragraph has been superceded use the current 34.21 instead of what appears below.** In § 34.21 the existing paragraph is redesignated as paragraph (a) and a new paragraph (b) is added to read as follows: 34.21 Limit on levels of radiation for radiographic exposure devices and storage contained (b)Paragraph (a) of this section applies to all equipment manufactured prior to January 10. 1991. After January 10, 1995, radiographic equipment other than			

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				storage containers and source changers must meet the requirements of § 34.20, and § 34.21 applies only to storage containers (source changers).			
§34.3 Current number is §34.101	Reporting requirements Current title is **Notifications**		C	**A new heading "Notifications" is added and a new § 34.30 is added under that heading to read as follows:** (a) In addition to the reporting requirements specified in §30.50 and under other sections of this chapter, such as §21.21, each licensee shall send a written report to the NRC's Office of Nuclear Material Safety and Safeguards, Division of Industrial and Medical Nuclear Safety, by an appropriate method listed in §30.6(a) of this chapter, within 30 days of the occurrence of any of the following incidents involving radiographic equipment: 1. (1) Unintentional disconnection of the source assembly from the control cable; (2) Inability to retract the source assembly to its fully shielded position and secure it in this position; or (3) Failure of any component (critical to safe operation of the device) to properly perform its intended function; (b) The licensee shall include the following information in each report submitted under paragraph (a) of this section, and in each report of			

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				overexposure submitted under 10 CFR 20.2203 which involves failure of safety components of radiography equipment: (1) A description of the equipment problem; (2) Cause of each incident, if known; (3) Name of the manufacturer and model number of equipment involved in the incident; (4) Place, date, and time of the incident; (5) Actions taken to establish normal operations; (6) Corrective actions taken or planned to prevent recurrence; and (7) Qualifications of personnel involved in the incident. (c) Any licensee conducting radiographic operations or storing radioactive material at any location not listed on the license for a period in excess of 180 days in a calendar year, shall notify the appropriate NRC regional office listed in §30.6(a)(2) of this chapter prior to exceeding the 180 days.			
§34.33 Current	Personnel monitoring		C	**In 34.33 paragraph (a) is revised to read as follows, and a new paragraph (n is added to read as follows:**			

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number is §34.47				a) The licensee may not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, each individual wears, on the trunk of the body, a direct reading dosimeter, an operating alarm ratemeter, and a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. At permanent radiography installations where other appropriate alarming or warning devices are in routine use, the wearing of an alarming ratemeter is not required. 1. (1) Pocket dosimeters must have a range from zero to 2 millisieverts (200 millirems) and must be recharged at the start of each shift. Electronic personal dosimeters may only be used in place of ion-chamber pocket dosimeters. (2) Each personnel dosimeter must be assigned to and worn only by one individual. ********** (f) Dosimetry reports received from the accredited NVLAP personnel dosimeter processor must be retained in accordance with §34.83. (g) Each alarm ratemeter must— (1) Be checked to ensure that the alarm functions properly (sounds) before using at the start of each shift;			

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				(2) Be set to give an alarm signal at a preset dose rate of 5 mSv/hr (500 mrem/hr); with an accuracy of plus or minus 20 percent of the true radiation dose rate; (3) Require special means to change the preset alarm function; and (4) Be calibrated at periods not to exceed 12 months for correct response to radiation. The licensee shall maintain records of alarm ratemeter calibrations in accordance with §34.83.			
Appendix A	This section has been removed and replaced			6.In Appendix A, Item II.C, "Use of personnel monitoring equipment," is amended to add paragraph 3, as follows: Appendix A II c . . . 3. Alarm ratemeters			