

**Minor Corrections, Clarifying Changes, and a Minor Policy Change**

(63 FR 39477, 63 FR 45393) RATS ID 1998-5 Effective 10/26/98

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§20.1003	Definitions		A	<p><b>Amended Definition:</b> Declared pregnant woman means a woman who has voluntarily informed the licensee, in writing, of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.</p>			
§20.1003	Definitions		A	<p><b>Amended Definition:</b> High radiation area means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv) in 1 hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.</p>			
§20.1003	Definitions		C	<p><b>Amended Definition:</b> Individual monitoring devices (individual monitoring equipment) means devices designed to be worn by a single individual for the assessment of dose equivalent such as film badges, thermoluminescence dosimeters (TLDs), pocket ionization chambers, and personal ("lapel") air sampling devices.</p>			
§20.1003	Definitions		A	<p><b>Amended Definition:</b> Lens dose equivalent (LDE) applies to the external exposure of the lens</p>			

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				of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm <sup>2</sup> ).			
§20.1003	Definitions		A	<p><b>Amended Definition:</b>            Very high radiation area means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose in excess of 500 rads (5 grays) in 1 hour at 1 meter from a radiation source or 1 meter from any surface that the radiation penetrates.</p>			
§20.1101 (b)	Radiation protection programs		H&S	<p><b>Revised Paragraph (b):</b>            (b) The licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA).</p>			
§20.1201	Occupational dose limits for adults		A	<p><b>Revised Paragraphs (a)(2) and (c):</b>            (a)(2)(i) A lens dose equivalent of 15 rems (0.15 Sv), and</p> <p>(c) The assigned deep-dose equivalent and shallow-dose equivalent must be for the part of the body receiving the highest exposure. The deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not</p>			

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				in the region of highest potential exposure, or the results of individual monitoring are unavailable.			
§20.1203	Determination of external dose from airborne radioactive material		A	<p><b>Revised Introductory Text:</b> Licensees shall, when determining the dose from airborne radioactive material, include the contribution to the deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent from external exposure to the radioactive cloud (see appendix B to part 20, footnotes 1 and 2).</p>			
§20.1206	Planned special exposures		D	<p><b>Revised Paragraph (a):</b> (a) The licensee authorizes a planned special exposure only in an exceptional situation when alternatives that might avoid the dose estimated to result from the planned special exposure are unavailable or impractical.</p>	N/A		
§20.1208	Dose equivalent to an embryo/fetus		A	<p><b>Revised paragraphs (a), (c) &amp; (d):</b> (a) The licensee shall ensure that the dose equivalent to the embryo/fetus during the entire pregnancy, due to the occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv). (For recordkeeping requirements, see Sec. 20.2106.)</p> <p>(c) The dose equivalent to the embryo/fetus is the sum of—</p> <p>(1) The deep-dose equivalent to the declared pregnant woman; and</p> <p>(2) The dose equivalent to the</p>			

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				<p>embryo/fetus resulting from radionuclides in the embryo/fetus and radionuclides in the declared pregnant woman.</p> <p>(d) If the dose equivalent to the embryo/fetus is found to have exceeded 0.5 rem (5 mSv), or is within 0.05 rem (0.5 mSv) of this dose, by the time the woman declares the pregnancy to the licensee, the licensee shall be deemed to be in compliance with paragraph (a) of this section if the additional dose equivalent to the embryo/fetus does not exceed 0.05 rem (0.5 mSv) during the remainder of the pregnancy.</p>			
§20.1501	General		H&S	<p><b>Amended paragraphs (a)(2)(i)&amp;(iii):</b></p> <p>(a)(2)  (i) The magnitude and extent of radiation levels; and  (iii) The potential radiological hazards.</p>			
§20.1502	Conditions requiring individual monitoring of external and internal occupational dose		H&S	<p><b>Amended Paragraph (a):</b></p> <p>(a) Each licensee shall monitor occupational exposure to radiation from licensed and unlicensed radiation sources under the control of the licensee and shall supply and require the use of individual monitoring devices by—</p> <p>(1) Adults likely to receive, in 1 year from sources external to the body, a dose in excess of 10 percent of the</p>			

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				<p>limits in §20.1201(a),</p> <p>(2) Minors likely to receive, in 1 year, from radiation sources external to the body, a deep dose equivalent in excess of 0.1 rem (1 mSv), a lens dose equivalent in excess of 0.15 rem (1.5 mSv), or a shallow dose equivalent to the skin or to the extremities in excess of 0.5 rem (5 mSv);</p> <p>(3) Declared pregnant women likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 0.1 rem (1 mSv);<sup>2</sup> and</p> <p><sup>2</sup>All of the occupational doses in §20.1201 continue to be applicable to the declared pregnant worker as long as the embryo/fetus dose limit is not exceeded.</p> <p>(4) Individuals entering a high or very high radiation area.</p>			
§20.1502	Conditions requiring individual monitoring of external and internal occupational dose		H&S	<p><b>Revised Paragraph (b):</b></p> <p>(b)</p> <p>(1) Adults likely to receive, in 1 year, an intake in excess of 10 percent of the applicable ALI(s) in table 1, Columns 1 and 2, of appendix B to Secs. 20.1001-20.2402;</p> <p>(2) Minors likely to receive, in 1 year, a committed effective dose equivalent in excess of 0.1 rem (1 mSv); and</p> <p>(3) Declared pregnant women likely to receive, during the entire</p>			

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				pregnancy, a committed effective dose equivalent in excess of 0.1 rem (1 mSv).			
§20.1903	Exceptions to posting requirements		D	<b>New Paragraph (d):</b> (d) Rooms in hospitals or clinics that are used for teletherapy are exempt from the requirement to post caution signs under Sec. 20.1902 if-- (1) Access to the room is controlled pursuant to 10 CFR 35.615; and (2) Personnel in attendance take necessary precautions to prevent the inadvertent exposure of workers, other patients, and members of the public to radiation in excess of the limits established in this part.	N/A		
§20.1906	Procedures for receiving and opening packages		H&S	In Sec. 20.1906, the introductory text of paragraph (d) is revised to read as follows: * * * * * (d) The licensee shall immediately notify the final delivery carrier and the NRC Operations Center (301-816-5100), by telephone, when-- * * * * *			
§20.2101	General provisions		C	<b>New Paragraph (b):</b> (b) In the records required by this part, the licensee may record quantities in SI units in parentheses following each of the units specified in paragraph (a) of this section. However, all quantities must be recorded as stated in paragraph (a) of this section.			
§20.2106	Records of individual		C	<b>Amended Paragraph (a):</b> a)			

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	monitoring results			<p>(1) The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose equivalent to the skin, and shallow-dose equivalent to the extremities;</p> <p>(2) The estimated intake of radionuclides (see Sec. 20.1202);</p> <p>(3) The committed effective dose equivalent assigned to the intake of radionuclides;</p> <p>(4) The specific information used to assess the committed effective dose equivalent pursuant to Sec. 20.1204(a) and (c), and when required by Sec. 20.1502;</p>			
§20.2202	Notification of incidents		C	<p><b>Amended Paragraphs (a)(1)(ii), (b)(1)(ii), and (d)(2):</b></p> <p>(a)(1)(ii) A lens dose equivalent of 75 rems (0.75 Sv) or more; or</p> <p>(b)(1)(ii) A lens dose equivalent exceeding 15 rems (0.15 Sv); or</p> <p>(d)(2) All other licensees shall make the reports required by paragraphs (a) and (b) of this section by telephone to the NRC Operations Center (301) 816-5100.</p>			
§35.641	Radiation surveys for teletherapy facilities		H&S	<p><b>Amended Paragraph (a)(2):</b></p> <p>(a)(2)</p> <p>(i) Radiation dose rates in restricted areas are not likely to cause any occupationally exposed individual to receive a dose in excess of the limits specified in Sec. 20.1201 of this chapter; and</p> <p>(ii) Radiation dose rates in controlled</p>			

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				or unrestricted areas are not likely to cause any individual member of the public to receive a dose in excess of the limits specified in Sec. 20.1301 of this chapter.			
§35.643	Modification of teletherapy unit or room before beginning a treatment program		H&S	<p>In Sec. 35.643, paragraphs (a) introductory text and (a)(1) are revised to read as follows:</p> <p>(a) If the survey required by Sec. 35.641 indicates that any individual member of the public is likely to receive a dose in excess of the limits specified in Sec. 20.1301 of this chapter, the licensee shall, before beginning the treatment program:</p> <p>(1) Either equip the unit with stops or add additional radiation shielding to ensure compliance with Sec. 20.1301 of this chapter.</p> <p>* * * * *</p>			
§36.23	Access control		H&S	<p><b>Amended Paragraph (g):</b></p> <p>(g) Each entrance to the radiation room of a panoramic irradiator and each entrance to the area within the personnel access barrier of an underwater irradiator must be posted as required by 10 CFR 20.1902. Radiation postings for panoramic irradiators must comply with the posting requirements of 10 CFR 20.1902, except that signs may be removed, covered, or otherwise made inoperative when the sources are fully shielded.</p>			

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§39.33	Radiation detection instruments		C	<p><b>Amended Paragraph (a):</b>            (a) The licensee shall keep a calibrated and operable radiation survey instrument capable of detecting beta and gamma radiation at each field station and temporary jobsite to make the radiation surveys required by this part and by part 20 of this chapter. To satisfy this requirement, the radiation survey instrument must be capable of measuring 0.001 mSv (0.1 mrem) per hour through at least 0.5 mSv (50 mrem) per hour.</p>			