[7590-01-P]

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 20, 32, 35, 36, 39

RIN 3150-AF46

Minor Corrections, Clarifying Changes, and a Minor Policy Change

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission is proposing to amend its regulations to make minor corrections and clarifying changes to the NRC's 10 CFR Part 20, "Standards for Protection Against Radiation." The proposed amendments would also conform other 10 CFR Parts with the Commission's revised radiation protection requirements. In addition, a minor policy change is proposed that would revise the monitoring criterion for minors from 0.05 rem (0.5 mSv) to 0.1 rem (1 mSv) in a year and for declared pregnant women from 0.05 rem (0.5 mSv) to 0.1 rem (1 mSv) during their pregnancies. Revising the monitoring criterion would not, in any way, raise the dose limit for declared pregnant women and minors. Licensees would still be required to ensure that the dose limit of 0.5 rem (5 mSv) for minors is not exceeded in a year and that the dose limit of 0.5 rem (5 mSv) for declared pregnant women is not exceeded during the period of their pregnancy. The dose limit for the embryo/fetus is unchanged. This proposed rule is necessary to inform the public of these minor changes to the NRC's regulations and invite comments.

EFFECTIVE DATE: Comment period expires (75 days following publication in the Federal Register). Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

ADDRESSES: Mail written comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; Attention: Docketing and Service Branch.

Deliver comments to: 11555 Rockville Pike, Rockville, Maryland, between 7:45 am and 4:15 pm Federal workdays.

Copies of the supporting statement submitted to OMB and comments received may be examined at the NRC Public Document Room at 2120 L Street NW. (Lower Level), Washington, DC.

For information on submitting comments electronically, see the discussion under Electronic Access in the Supplementary Information section.

FOR FURTHER INFORMATION CONTACT: Jayne M. McCausland, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 415-6219, e-mail JMM2 @ nrc.gov.

SUPPLEMENTARY INFORMATION:

On May 21, 1991 (56 FR 23360), a final rule was published in the Federal Register that amended 10 CFR Part 20 to update the NRC's "Standards for Protection Against Radiation." Subsequent amendments were published to (1) change the mandatory implementation date to January 1, 1994, and make

conforming changes to the text to reflect the new implementation date (57 FR 38588; August 26, 1992), (2) remove or modify provisions to reflect the new implementation date for NRC's revised "Standards for Protection Against Radiation" (58 FR 67657; December 22, 1993), and (3) restore provisions inadvertently removed or modified (59 FR 41641; August 15, 1994; and 60 FR 20183; April 25, 1995). This proposed rule would make additional minor corrections and clarifying changes to the NRC regulation for greater clarity and to further facilitate implementation. The proposed rule would also make conforming amendments to 10 CFR Parts 32, 35, 36, and 39. In addition, a minor policy change is proposed that would revise the monitoring criterion for minors from 0.05 rem (0.5 mSv) to 0.1 rem (1 mSv) in a year and for declared pregnant women from 0.05 rem (0.5 mSv) to 0.1 rem (1 mSv) during their pregnancies.

This proposed rule would make the following changes:

(1) In § 20.1003, "Definitions," clarifying changes and minor corrections would be made to the following:

(a) The term "Airborne radioactivity area" would be replaced with "Airborne radioactive material area" to clarify that radioactivity is a property of matter and, as such, cannot be airborne. A conforming change would also be made in § 20.1902(d) to permit licensees the option of either using the current signs or posting new signs to reflect this change.

(b) The definition of "Declared pregnant woman" would be revised to specify that the written declaration of pregnancy would be given to the licensee. This is necessary to ensure that the licensee responsible for work assignments involving exposure is aware of the declaration of pregnancy so

that appropriate dose restriction can be imposed. The change would also specify the duration of the effectiveness of a woman's declaration.

(c) The term "Eye dose equivalent" (EDE) would be replaced with "Lens dose equivalent" (LDE) to avoid confusion between the initialisms for dose to the lens of the eye and effective dose equivalent (EDE).

(d) The definitions of "High radiation area" and "Very high radiation area" would be revised to make it clear that these area designations are based solely on radiation levels from sources external to an individual who may receive the dose.

(e) The definition of "Individual monitoring devices" would be revised to correct the terminolo for thermoluminescence dosimeters.

(2) In § 20.1101(b), the word "practicable" would be changed to "practical" to remove the basis for an incorrect perception among some licensees that, by using the word "practicable" in this section, the NRC is requiring licensees to use any dose averting technique that is capable of being used even if the technique is unproven or impractical.

(3) In §§ 20.1201(a)(2)(i) and (c); 20.1203; 20.2101; 20.2106(a)(1); and 20.2202(a)(1)(ii) and (b)(1)(ii), "eye dose equivalent" would be replaced by "lens dose equivalent" to conform to the proposed amendment in § 20.1003.

(4) In § 20.1206, Planned special exposures, paragraph (a) would be revised to clarify the meaning of "higher exposure." The proposed new wording would state that planned special exposures are authorized only in exceptional situations when alternatives that might avoid the dose are unavailable or impractical.

(5) In § 20.1208(a), (c), (c)(2), and (d), the phrase "dose to an embryo/fetus" would be changed to read "dose equivalent to the embryo/fetus"

to make it clear that the dose limit specifically applies to the dose equivalent, which is the technically correct term to denote effect of dose to an organ.

(6) In § 20.1501(a)(2)(i), the phrase "The extent of radiation levels;..." would be revised to read "The magnitude and extent of radiation levels;...." to more clearly reflect the intended meaning.

(7) In § 20.1501(a)(2)(iii), the phrase "The potential radiological hazards that could be present" would be revised to read "The potential radiological hazards" to remove the redundancy.

(8) In § 20.1502, the words "from radiation sources under the control of the licensee" would be added after "exposure to radiation" in paragraph (a) to improve clarity and to make it clear that a licensee is not responsible for sources not under its control.

(9) In § 20.1502(a)(2) and (b)(2), monitoring requirements are stated as one-tenth of applicable limits for a year for minors and pregnant women, even though the dose limits referenced in paragraph (a)(2) apply for an entire year to minors while the dose limit referenced in paragraph (b)(2) applies only to the 9-month gestation period of a declared pregnant woman. These paragraphs would be separated and revised accordingly to make this section consistent with § 20.1208 and technically correct. In addition, the criterion for monitoring minors and declared pregnant women would be changed for minors from 0.05 rem (0.5 mSv) to 0.1 rem (1 mSv) in a year and for declared pregnant women from 0.05 rem (0.5 mSv) to 0.1 rem (1 mSv) during their pregnancies. This change would constitute a small licensee burden reduction with no loss in worker health and safety. The conservative approach currently in use has resulted in the following problems:

(a) The value is not consistent with the 0.1 rem (1 mSv) dose limit for members of the public in § 20.1301(a). It is not appropriate to require monitoring of workers who are expected to receive less dose than is permitted for members of the public; and

(b) The value is not consistent with the 100-mrem (1 mSv) training criterion in the recently revised § 19.12 (60 FR 36038; July 13, 1995).

Raising this limit would not, in any way, raise the dose limit for declared pregnant women and minors. Licensees would still be required to ensure that the dose limit of 0.5 rem (5 mSv) for minors is not exceeded in a year and that the dose limit of 0.5 rem (5 mSv) for declared pregnant women is not exceeded during the period of their pregnancy.

(10) In § 20.1902(d), a proposed change to the posting requirement would permit the use of the words "Airborne Radioactive Material Area" in place of the currently required "Airborne Radioactivity Area." The proposed change would also permit the continued use of existing stocks of signs with the currently required "Airborne Radioactivity Area." This would conform to the proposed amendment in § 20.1003.

(11) In § 20.1903, a new paragraph would be added to exempt teletherapy rooms in a hospital from posting requirements as long as access is controlled to prevent the exposure of workers, other patients, and members of the public to radiation. The purpose of this change is to bring the regulation into conformity with existing licensing practices which avoid the unwarranted and potentially unsettling effect that "GRAVE DANGER, VERY HIGH RADIATION AREA" signs may have on patients.

(12) In § 20.1906(d), a revision would require licensees to notify the NRC Operations Center, instead of an NRC Regional Office, upon receiving and

opening packages when radiation levels exceed regulatory limits. This would provide for consistency within the prompt notification requirements contained in § 20.2201. A conforming change also would be made to the prompt notification requirements in § 20.2202.

(13) In § 20.2101, a revision would permit licensees to include both the new SI units and the old (special) units of dose on records required by this part. Each of the recorded dose quantities would be recorded in the appropriate special unit and, if so desired, followed by the appropriate SI unit in parentheses. The term "eye dose equivalent" would be replaced by "lens dose equivalent" to conform to the proposed amendment in § 20.1003.

(14) In § 20.2106(a)(2) and (a)(3), the references to "body burden" would be removed because this term is obsolete and is not defined in revised 10 CFR Part 20. Section 20.2106(a)(4) would be revised by adding a reference to § 20.1204(a), which requires licensees to take measurements of (1) concentrations of radioactive materials in air in work areas, or (2) quantities of radionuclides in the body, or (3) quantities of radionuclides excreted from the body, or (4) combinations of these measurements in order to determine internal dose when required by § 20.1502 to monitor internal dose. This, in effect, uses recorded concentrations of radioactive material in air, quantities of radioactive material determined to be in the body, or excreta, or any combination of these that would be needed, instead of "body burden," for assessing the committed effective dose equivalent (CEDE). The NRC believes that this information is clearly necessary to support the recorded results of the licensee's calculation of CEDE. Adding this reference would not impose any additional recordkeeping

burden on licensees because they are required to obtain this information in order to calculate CEDE under § 20.1204.

(15) A revision to § 20.2202(d) would result in the application of the same incident reporting requirements to all licensees. Currently, this section requires that power reactor licensees submit reports to the NRC Operations Center, but all other licensees must submit both a telephone report to the NRC Operations Center and a telegram, mailgram, or facsimile to the Regional Office. This change would require all licensees to report incidents by telephone to the NRC Operations Center ensuring consistency in the prompt notification requirements contained elsewhere in this part and would result in a reduction in the information collection burden.

(16) In § 32.54(a), the reference to "§ 20.203(a)" would be corrected to read "§ 20.1901."

(17) In § 35.20, "ALARA program," paragraph (c) would be removed as redundant because the requirements that are to be addressed in the ALARA program are contained in 10 CFR Part 20, and the training requirements are addressed in 10 CFR 19.12. Part 35 references both Parts 19 and 20 as containing requirements for medical licensees.

(18) Safety precautions and survey requirements for restricted and unrestricted areas are specified in §§ 35.315, 35.415, 35.641, and 35.643. Sections 35.315(a)(4) and 35.415(a)(4) would be revised to remove the words "restricted" and "unrestricted" where they modify the word "area." Sections 35.641(a)(2)(i) and (a)(2)(ii) and 35.643(a) would be revised to be consistent with definitions of dose to occupationally exposed individuals and dose to members of the public. Also, in § 35.643(a)(1), a misreference to § 20.1301(c) would be corrected to read § 20.1301. The 0.5 rem (5 mSv) limit

permitted by application and NRC approval under § 20.1301(c) was never intended to be required under this section in Part 35. Rather, it was always the intent of the NRC to apply the 0.1 rem (1 mSv) limit in § 20.1301(a) to this section, with the provision for licensees to request the 0.5 rem limit specified in § 20.1301(c).

(19) In § 36.23(g), posting requirements for a panoramic irradiator would be revised to conform with posting requirements for high or very high radiation areas in § 20.1902. The posting requirements in Part 36 currently require a posting appropriate to a high radiation area only.

(20) In § 39.33, "Radiation detection instruments," a conforming change to paragraph (a) would be made by replacing the term "milliroentgens" with the term "millirems" to be consistent with revised Part 20 terminology. Because the NRC recognizes that most licensees may still use radiation detection instruments that measure radiation in units of roentgens, measurements taken in roentgens could continue to be recorded in terms of the roentgen, provided that the measurements can be readily converted to rem for records required under 10 CFR Part 20.2101(a).

(21) In § 39.71(b), the reference to "§ 20.3" would be corrected to read "§ 20.1003."

Electronic Access

Comments on the proposed rule may also be submitted electronically in either ASCII text or Wordperfect format (version 5.1 or later) by calling the NRC Electronic Bulletin Board on FedWorld. The bulletin board may be accessed

using a personal computer, a modem, and one of the commonly available communications software packages, or directly via Internet.

If using a personal computer and modem, the NRC rulemaking subsystem on FedWorld can be accessed directly by dialing the toll free number: 1-800-303-9672. Communication software parameters should be set as follows: parity to none, data bits to 8, and stop bits to 1 (N,8,1). Use ANSI or VT-100 terminal emulation. The NRC rulemaking systems can then be accessed by selecting the "Rules Menu" option from the "NRC Main Menu." For further information about options available for NRC at FedWorld, consult the "Help/Information Center" from the "NRC Main Menu." Users will find the "FedWorld Online User's Guides" particularly helpful. Many NRC subsystems and databases also have a "Help/Information Center" option that is tailored to the particular subsystem.

The NRC subsystem on FedWorld can also be accessed by a direct dial phone number for the main FedWorld BBS: 703-321-3339; Telnet via Internet: fedworld.gov (192.239.92.3); File Transfer Protocol (FTP) via Internet: ftp.fedworld.gov (192.239.92.205); and World Wide Web using the "Home Page": www.fedworld.gov (this is the Uniform Resource Locator (URL)). If you contact FedWorld using Telnet, you will see the NRC area and menus, including the Rules Menu. Although you will be able to download documents and leave messages, you will not be able to write comments or upload files (comments). If you contact FedWorld using FTP, all files can be accessed and downloaded but uploads are not allowed; all you will see is a list of files without descriptions (normal Gopher look). An index file listing all files within a subdirectory, with descriptions, is available. There is a 15-minute time limit for FTP access.

Although FedWorld also can be accessed through the World Wide Web, like FTP that mode only provides access for downloading files and does not display the NRC Rules Menu.

If using a method other than the NRC's toll free number to contact FedWorld, the NRC subsystem will be accessed from the main FedWorld menu by selecting "F - Regulatory, Government Administration and State Systems" or by entering the command "/go nrc" at a FedWorld command line. At the next menu, select "A - Regulatory Information Mall," and then select "A - U.S. Nuclear Regulatory Commission" at the next menu. If you access NRC from FedWorld's "Regulatory, Government Administration" menu, you may return to FedWorld by selecting the "Return to FedWorld" option from the "NRC Main Menu." However, if you access NRC at FedWorld by using NRC's toll-free number, you will have full access to all NRC systems, but you will not have access to the main FedWorld system. For more information on NRC bulletin boards, call Mr. Arthur Davis, Systems Integration and Development Branch, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-5780; e-mail AXD3@nrc.gov.

Agreement State Compatibility

This rulemaking will be a matter of compatibility between the NRC and the Agreement States, thereby providing consistency of State and Federal safety requirements. The NRC has determined that a Division 2 level of compatibility should be assigned to the changes to §§ 20.1003, 20.1101, 20.1201, 20.1206, 20.1208, 20.1501, 20.1502, 20.1902, 20.1903, 20.1906, 20.2101, 20.2106, 20.2202, 32.54, 35.20, 35.315, 35.415, 35.641, 35.643,

36.23, 39.33, and 39.71 because the requirements in these sections already have been assigned a Division 2 level of compatibility. This rulemaking is primarily of a clarifying nature so the basis for that assignment should not change.

Environmental Impact: Categorical Exclusion

The NRC has determined that this proposed rule is the type of action described in the categorical exclusion in 10 CFR 51.22(c)(2). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this proposed rule.

Paperwork Reduction Act Statement

This proposed rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). This rule has been submitted to the Office of Management and Budget for review and approval of the paperwork requirements.

The rule will reduce existing information collection requirements, and the public burden for this collection of information is expected to be reduced by approximately 250 hours per year over the entire industry. This reduction includes the time required for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The U.S. Nuclear Regulatory Commission is seeking public comment on the potential impact of the collection of information contained in the proposed rule and on the following issues:

1. Is the proposed collection of information necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?
2. Is the estimate of burden accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?
4. How can the burden of the collection of information be minimized, including the use of automated collection techniques?

Send comments on any aspect of this proposed collection of information, including suggestions for reducing the burden, to the Information and Records Management Branch (T-6F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail at BJS1@NRC.GOV; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0014), Office of Management and Budget, Washington, DC 20503.

Comments to OMB on the collection of information or on the above issues should be submitted by (insert date 30 days after publication in the Federal Register). Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Regulatory Analysis

This proposed rule makes minor correcting and clarifying amendments to the requirements in 10 CFR Part 20 and conforms 10 CFR Parts 32, 35, 36, and 39 to 10 CFR Part 20. The proposed rulemaking would not impose any additional costs on licensees since the rulemaking would be correcting and clarifying several definitions and current requirements addressing standards for protection against radiation. No impact is anticipated to result from any of the proposed correcting or clarifying amendments. Because the proposed rule would improve clarity and consistency in the NRC's regulations, it would benefit the licensees.

The proposed amendments should result in a minor reduction in burden to licensees by eliminating written reports and allowing licensees to submit incident reports by telephone. This proposed change is consistent with the Paperwork Reduction Act. The proposed requirements also would waive posting requirements in teletherapy rooms in hospitals because of the unsettling effects that the signs have on patients. There would be no decrease in safety because the safety precautions in 10 CFR Part 35 are considered adequate to protect individuals from inadvertent exposure to radiation. This proposed change would have a beneficial effect on patients.

In addition, these proposed amendments would change the monitoring requirement for minors and pregnant women from one-tenth of the applicable limit or 0.05 rem (0.5 mSv) to 0.1 rem (1 mSv) for the following reasons:

(1) The value is consistent with the 100 mrem (1 mSv) training criterion in the recently revised 10 CFR 19.12 (60 FR 36038; July 13, 1995).

Thus, monitoring would not be required at any dose below that requiring the training of workers.

(2) The value is consistent with the 0.1 rem (1 mSv) dose limit for members of the public in 10 CFR 20.1301(a). It is not necessary or appropriate to require monitoring of workers who are expected to receive less dose than is permitted for members of the public. There may be some reduction in burden, but any reduction would be small, and because of the many factors that impact the decision as to whether personal dosimeters will be worn, it is impossible to assess this likely small burden reduction.

This discussion constitutes the regulatory analysis for this proposed rule.

Backfit Analysis

The NRC has determined that the backfit rule in § 50.109 does not apply to this proposed rule and, therefore, that a backfit analysis is not required for this proposed rule because these amendments do not involve any provision that would impose backfits as defined in § 50.109(a)(1).

List of Subjects

10 CFR Part 20

Byproduct material, Criminal penalties, Licensed material, Nuclear materials, Nuclear power plants and reactors, Occupational safety and health, Packaging and containers, Radiation protection, Reporting and recordkeeping requirements, Special nuclear material, Source material, Waste treatment and disposal.

10 CFR Part 32

Byproduct material, Criminal penalties, Labeling, Nuclear materials, Radiation protection, Reporting and recordkeeping requirements.

10 CFR Part 35

Byproduct material, Criminal penalties, Drugs, Health facilities, Health professions, Medical devices, Nuclear materials, Occupational safety and health, Radiation protection, Reporting and recordkeeping requirements.

10 CFR Part 36

Byproduct material, Criminal penalties, Nuclear material, Oil and gas exploration - well logging, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Source material, Special nuclear material.

10 CFR Part 39

Byproduct material, Criminal penalties, Nuclear material, Oil and gas exploration - well logging, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Source material, Special nuclear material.

PART 20 - STANDARDS FOR PROTECTION AGAINST RADIATION

1. The authority citation for Part 20 continues to read as follows:

AUTHORITY: Secs. 53, 63, 65, 81, 103, 104, 161, 182, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 953, 955, as amended, sec. 1701, 106 Stat. 2951,

2952, 2953 (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201, 2232, 2236, 2297f), secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

2. In § 20.1003, the definitions of Airborne radioactivity area and Eye dose equivalent are removed. The definitions of Airborne radioactive material area and Lens dose equivalent are added in alphabetical order, and the definitions of Declared pregnant woman, High radiation area, Individual monitoring devices, and Very high radiation area are revised to read as follows:

§ 20.1003 Definitions.

* * * * *

Airborne radioactive material area means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exist in concentrations --

(1) In excess of the derived air concentrations (DACs) specified in Appendix B to §§ 20.1001-20.2402; or

(2) To such a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours that an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or 12 DAC-hours.

* * * * *

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.

* * * * *

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.

* * * * *

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.

* * * * *

Lens dose equivalent applies to the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm^2).

* * * * *

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.

* * * * *

3. In § 20.1101, paragraph (b) is revised to read as follows:

§ 20.1101 Radiation protection programs.

* * * * *

(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).

* * * * *

4. In § 20.1201, paragraphs (a)(2)(i) and (c) are revised to read as follows:

§ 20.1201 Occupational dose limits for adults

(a) * * *

(2) * * *

(i) A lens dose equivalent of 15 rems (0.15 Sv), and

* * * * *

(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 in the region of highest potential exposure, or the results of individual monitoring are unavailable.

* * * * *

5. In § 20.1203, the introductory text is revised to read as follows:

§ 20.1203 Determination of external dose from airborne radioactive material.

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).

* * * * *

6. In § 20.1206, paragraph (a) is revised to read as follows:

§ 20.1206 Planned special exposures.

* * * * *

(a) The licensee authorizes a planned special exposure only in an exceptional situation when alternatives that might avoid any additional dose estimated to result from the planned special exposure are unavailable or im actical.

* * * * *

7. In § 20.1208, paragraph (a), the introductory text of paragraph (c), and paragraphs (c)(2) and (d) are revised to read as follows:

§ 20.1208 Dose equivalent to an embryo/fetus.

(a) The licensee shall ensure that the dose equivalent to the embryo/fetus during the entire pregnancy as a result of the occupational

exposure of a declared pregnant woman does not exceed 0.5 rem (5 mSv). (For recordkeeping requirements, see § 20.2106.)

* * * * *

(c) The dose equivalent to the embryo/fetus is the sum of--

* * * * *

(2) The dose equivalent to the embryo/fetus resulting from radionuclides in the embryo/fetus and radionuclides in the declared pregnant woman.

(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.

8. In § 20.1501, paragraphs (a)(2)(i) and (a)(2)(iii) are revised to read as follows:

§ 20.1501 General.

(a) * * *

(2) * * *

(i) The magnitude and extent of radiation levels; and

* * * * *

(iii)The potential radiological hazards.

* * * * *

9. In § 20.1502, paragraph (a)(3) is redesignated as (a)(4) and new paragraphs (a)(3) and (b)(3) are added; and the introductory text of paragraph (a) and paragraphs (a)(2), (b)(1), and (b)(2) are revised to read as follows:

§ 20.1502 Conditions requiring individual monitoring of external and internal occupational dose.

* * * * *

(a) Each licensee shall monitor occupational exposure to radiation from radiation sources under the control of the licensee and shall supply and require the use of individual monitoring devices by --

* * * * *

(2) Minors likely to receive, in 1 year, from radiation sources external to the body, a dose equivalent in excess of 0.1 rem (1 mSv);

(3) Declared pregnant women likely to receive, during the entire pregnancy from radiation sources external to the body, a dose equivalent in excess of 0.1 rem (1 mSv); and

(4) Individuals entering a high or very high radiation area.

(b) * * *

(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 §§ 20.1001-20.2402; and

(2) Minors likely to receive, in 1 year, a committed effective dose equivalent in excess of 0.1 rem (1 mSv); and

(3) Declared pregnant women likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 0.1 rem (1 mSv).

10. In § 20.1902, paragraph (d) is revised to read as follows:

§ 20.1902 Posting requirements.

* * * * *

(d) Posting of airborne radioactive material areas. The licensee shall post each airborne radioactive material area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA"; "DANGER, AIRBORNE RADIOACTIVITY AREA"; "CAUTION, AIRBORNE RADIOACTIVE MATERIAL AREA"; or "DANGER, AIRBORNE RADIOACTIVE MATERIAL AREA."

* * * * *

11. In § 20.1903, a new paragraph (d) is added to read as follows:

§ 20.1903 Exceptions to posting requirements.

* * * * *

(d) Rooms in hospitals or clinics that are used for teletherapy are exempt from the requirement to post caution signs under § 20.1902 if --

(1) Access to the room is controlled pursuant to § 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.

12. In § 20.1906, the introductory text of paragraph (d) is revised to read as follows:

§ 20.1906 Procedures for receiving and opening packages.

* * * * *

(d) The licensee shall immediately notify the final delivery carrier and the NRC Operations Center (301-816-5100), by telephone, when--

* * * * *

13. In § 20.2101, paragraph (b) is redesignated as paragraph (c), paragraph (c) is redesignated as paragraph (d) and revised, and a new paragraph (b) is added to read as follows:

§ 20.2101 General provisions.

* * * * *

(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.

(c) Notwithstanding the requirements of paragraph (a) of this section, when recording information on shipment manifests, as required in § 20.2006(b), information must be recorded in the International System of Units (SI) or in SI and units as specified in paragraph (a) of this section.

(d) The licensee shall make a clear distinction among the quantities entered on the records required by this part (e.g., total effective dose equivalent, shallow-dose equivalent, lens dose equivalent, deep-dose equivalent, committed effective dose equivalent).

14. In § 20.2106, paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) are revised to read as follows:

§ 20.2106 Records of individual monitoring results.

(a) * * *

(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; and

(2) The estimated intake of radionuclides (see § 20.1202); and

(3) The committed effective dose equivalent assigned to the intake of radionuclides; and

(4) The specific information used to assess the committed effective dose equivalent pursuant to § 20.1204(a) and (c), and when required by § 20.1502; and

* * * * *

15. In § 20.2202, paragraphs (a)(1)(ii), (b)(1)(ii), and (d)(2) are revised to read as follows:

§ 20.2202 Notification of incidents.

(a) * * *

(1) * * *

(ii) A lens dose equivalent of 75 rems (0.75 Sv) or more; or

(b) * * *

(1) * * *

(ii) A lens dose equivalent exceeding 15 rems (0.15 Sv); or

(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.

* * * * *

PART 32 - SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL

16. The authority citation for Part 32 continues to read as follows:

Authority: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841).

§ 32.54 [Amended]

17. In § 32.54, paragraph (a) is amended by revising the reference to "§ 20.203(a)" to read "§ 20.1901."

PART 35 -- MEDICAL USE OF BYPRODUCT MATERIAL

18. The authority citation for Part 35 continues to read as follows:

Authority: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841).

§ 35.20 [Amended].

19. In § 35.20, paragraph (c) is removed.

20. In § 35.315, paragraph (a)(4) is revised to read as follows:

§ 35.315 Safety precautions.

(a) * * *

(4) Promptly after administration of the dosage, measure the dose rates in contiguous areas with a radiation measurement survey instrument to demonstrate compliance with the requirements of Part 20 of this chapter, and retain for 3 years a record of each survey that includes the time and date of the survey, a plan of the area or list of points surveyed, the measured dose rate at each point surveyed expressed in millirem per hour, the instrument used to make the survey, and the initials of the individual who made the survey.

* * * * *

21. In § 35.415, paragraph (a)(4) is revised to read as follows:

§ 35.415 Safety precautions.

(a) * * *

(4) Promptly after implanting the material, survey the dose rates in contiguous areas with a radiation measurement survey instrument to demonstrate compliance with the requirements of Part 20 of this chapter, and retain for

3 years a record of each survey that includes the time and date of the survey, a plan of the area or list of points surveyed, the measured dose rate at several of these points expressed in millirem per hour, the instrument used to make the survey, and the name of the individual who made the survey.

* * * * *

22. In § 35.641, paragraphs (a)(2)(i) and (a)(2)(ii) are revised to read as follows:

§ 35.641 Radiation surveys for teletherapy facilities.

(a) * * *

(2) * * *

(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 § 20.1201 of this chapter; and

(ii) Radiation dose rates in unrestricted areas are not likely to cause any individual member of the public to receive a dose in excess of the limits specified in § 20.1301 of this chapter.

* * * * *

23. In § 35.643, paragraphs (a) and (a)(1) are revised to read as follows:

§ 35.643 Modification of teletherapy unit or room before beginning a treatment program.

(a) If the survey required by § 35.641 indicates that any individual member of the public is likely to receive a dose in excess of the limits specified in § 20.1301 of this chapter, the licensee shall, before beginning the treatment program:

(1) Either equip the unit with stops or add additional radiation shielding to ensure compliance with § 20.1301 of this chapter.

* * * * *

PART 36 -- LICENSES AND RADIATION SAFETY REQUIREMENTS FOR IRRADIATORS

24. The authority citation for Part 36 continues to read as follows:

Authority: Secs. 81, 82, 161, 182, 183, 186, 68 Stat. 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

25. In § 36.23, paragraph (g) is revised to read as follows:

§ 36.23 Access control.

* * * * *

(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 § 20.1902. Radiation postings for panoramic irradiators must comply with the posting requirements of § 20.1902,

except that signs may be removed, covered, or otherwise made inoperative when the sources are fully shielded.

* * * * *

PART 39 - LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING

26. The authority citation for Part 39 continues to read as follows:

Authority: Secs. 53, 57, 62, 63, 65, 69, 81, 82, 161, 182, 183, 188, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2112, 2201, 2233, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

27. In § 39.33, paragraph (a) is revised to read as follows:

§ 39.33 Radiation detection instruments.

(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 0.1 mrem (0.001 mSv) per hour through at least 50 mrem (0.5 mSv) per hour.

* * * * *

§ 39.71 [Amended]

28. In § 39.71, paragraph (b) is amended by revising the reference to "§ 20.3" to read "§ 20.1003."

Dated at Rockville, Maryland, this 5th day of September 1996.

For the Nuclear Regulatory Commission.

James M. Taylor,
Executive Director for Operations.

CONGRESSIONAL CORRESPONDENCE SYSTEM
DOCUMENT PREPARATION CHECKLIST

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