

4732.0410 OCCUPATIONAL DOSE LIMITS FOR ADULTS.

Subpart 1. **Applicability.** This part applies to all registrants.

Subp. 2. **Occupational dose control.** The registrant must control the occupational dose to individual adults, except for planned special exposures, according to part 4732.0425, to the following annual dose limit, which is the more limiting of:

- A. the total effective dose equivalent being equal to five rem (0.05 Sv); or
- B. the sum of the deep dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 50 rem (0.5 Sv); and
- C. the annual limits to the lens of the eye, to the skin, and to the extremities, which are:
 - (1) a lens dose equivalent of 15 rem (0.15 Sv); and
 - (2) a shallow dose equivalent of 50 rem (0.5 Sv) to the skin or to any extremity.

Subp. 3. **Doses in excess of limits.** Doses received in excess of the annual limits, including doses received during accidents, emergencies, and planned special exposures, must be subtracted from the limits for planned special exposures that the individual may receive during the current year.

Subp. 4. **Dose equivalent.**

A. The assigned deep dose equivalent and shallow dose equivalent must be for the portion of the body receiving the highest exposure.

B. 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.

C. When a protective apron is worn while working with fluoroscopic equipment and monitoring is conducted as specified in part 4732.0440, subpart 3, the effective dose equivalent for external radiation must be determined as follows:

- (1) when only one individual monitoring device is used and it is located at the neck (collar) outside the protective apron, the reported deep dose equivalent must be the effective dose equivalent for external radiation; or
- (2) when only one individual monitoring device is used and it is located at the neck (collar) outside the protective apron, the reported deep dose equivalent value multiplied by 0.3 must be the effective dose equivalent for external radiation; or

(3) when individual monitoring devices are worn, both under the protective apron at the waist and outside the protective apron at the neck, the effective dose equivalent for external radiation must be assigned the value of the sum of the deep dose equivalent reported for the individual monitoring device located at the waist under the protective apron multiplied by 1.5 and the deep dose equivalent reported for the individual monitoring device located at the neck outside the protective apron multiplied by 0.04.

D. Any alternative method of determining dose must be approved by the commissioner.

Subp. 5. **Reduction of dose.** The registrant must reduce the dose that an individual may be allowed to receive in the current year by the amount of occupational dose received while employed by any other person during the current year.

Subp. 6. **Dose information.** The employee must supply information to the registrant about other current occupational doses received due to employment at multiple facilities.

Statutory Authority: *MS s 144.12*

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