

**4731.2020 OCCUPATIONAL DOSE LIMITS FOR ADULTS.**

Subpart 1. **Dose limits.** Except for planned special exposures according to part 4731.2060, a licensee must control the occupational dose to individual adults to the following dose limits:

A. an annual limit, which is the more limiting of:

- (1) the total effective dose equivalent being equal to five rems (0.05 Sv); or
- (2) 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 rems (0.5 Sv); and

B. the annual limits to the lens of the eye, to the skin of the whole body, and to the skin of the extremities, which are:

- (1) a lens dose equivalent of 15 rems (0.15 Sv); and
- (2) a shallow dose equivalent of 50 rems (0.5 Sv) to the skin of the whole body or to the skin of any extremity.

Subp. 2. **Excess doses.** 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 as specified under part 4731.2060, item E, subitem (1), and during the individual's lifetime as specified under part 4731.2060, item E, subitem (2).

Subp. 3. **Assessing dose.** When the external exposure is determined by measurement with an external personal monitoring device, the deep-dose equivalent must be used in place of the effective dose equivalent, unless the effective dose equivalent is determined by a dosimetry method approved by the commissioner. The assigned deep dose equivalent must be for the part of the body receiving the highest exposure. The assigned shallow dose equivalent must be the dose averaged over the contiguous ten square centimeters of skin receiving the highest exposure. The deep dose equivalent, lens dose equivalent, and shallow dose equivalent may be assessed from surveys or other radiation measurements to demonstrate compliance with the occupational dose limits if the individual monitoring device was not in the region of highest potential exposure or if the results of individual monitoring are unavailable.

Subp. 4. **DAC and ALI values.** Derived air concentration (DAC) and annual limit on intake (ALI) values in part 4731.2750 may be used by the licensee to determine an individual's dose according to part 4731.2540 and to demonstrate compliance with the occupational dose limits.

Subp. 5. **Soluble uranium intake.** In addition to the annual dose limits, a licensee must limit the soluble uranium intake by an individual to ten milligrams in a week in consideration of chemical toxicity according to part 4731.2750, subpart 7, footnote 3.

Subp. 6. **Other employment.** A licensee 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 according to part 4731.2520, subpart 5.

**Statutory Authority:** *MS s 144.1202; 144.1203*

**History:** *29 SR 755; 33 SR 1440*

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