

4731.2260 USE OF INDIVIDUAL RESPIRATORY PROTECTION EQUIPMENT.

Subpart 1. **Applicability.** This part applies if a licensee assigns or permits the use of respiratory protection equipment to limit intake of radioactive material.

Subp. 2. **NIOSH certification.** A licensee must use only respiratory protection equipment that is tested and certified by the National Institute for Occupational Safety and Health (NIOSH), except as otherwise noted in this part.

Subp. 3. **Alternative equipment.** If a licensee wishes to use equipment that has not been tested or certified by NIOSH, or for which there is no schedule for testing or certification, the licensee must submit an application to the commissioner for authorized use of the equipment, except as provided in this part. The application must include evidence that the material and performance characteristics of the equipment are capable of providing the proposed degree of protection under anticipated conditions of use. This must be demonstrated by licensee testing or on the basis of reliable test information.

Subp. 4. **Respiratory protection program.** A licensee must implement and maintain a respiratory protection program that includes:

A. air sampling sufficient to identify a potential hazard, permit proper equipment selection, and estimate doses;

B. surveys and bioassays, as necessary, to evaluate actual intakes;

C. testing of respirators for operability and user seal check for face sealing devices and functional check for others immediately prior to each use;

D. written procedures regarding:

(1) monitoring, including air sampling and bioassays;

(2) supervision and training of respirator users;

(3) fit testing;

(4) respirator selection;

(5) breathing air quality;

(6) inventory and control;

(7) storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment;

(8) record keeping; and

(9) limitations on periods of respirator use and relief from respirator use;

E. a determination by a physician that an individual user is medically fit to use the respiratory protection equipment:

- (1) before the initial fitting of a face sealing respirator;
- (2) before the first field use of nonface sealing respirators; and
- (3) either every 12 months thereafter or periodically at a frequency determined by a physician; and

F. fit testing, with a fit factor greater than or equal to 10 times the APF for negative pressure devices and a fit factor greater than or equal to 500 for any positive pressure, continuous flow, and pressure-demand devices, before the first field use of tight fitting, face-sealing respirators and periodically thereafter at a frequency not to exceed one year. Fit testing must be performed with the facepiece operating in the negative pressure mode.

Subp. 5. **User advise.** A licensee must advise each respirator user that the user may leave the area at any time for relief from respirator use in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other conditions that might require such relief.

Subp. 6. **Equipment limitations.** A licensee must consider limitations appropriate to the type and mode of use. When selecting respiratory devices, a licensee must provide for vision correction, adequate communication, low temperature work environments, and the concurrent use of other safety or radiological protection equipment. A licensee must use the equipment in such a way as not to interfere with the proper operation of the respirator.

Subp. 7. **Standby rescue persons.**

A. Standby rescue persons are required whenever one-piece atmosphere-supplying suits or any combination of supplied-air respiratory protection device and personnel protective equipment are used from which an unaided individual would have difficulty extricating himself or herself.

B. The standby persons must be equipped with respiratory protection devices or other apparatus appropriate for the potential hazards.

C. The standby rescue persons must observe or otherwise maintain continuous communication with the workers, by voice, visual, signal line, telephone, radio, or other suitable means, and be immediately available to assist them in case of a failure of the air supply or for any other reason that requires relief from distress.

D. A sufficient number of standby rescue persons must be immediately available to assist all users of this type of equipment and to provide effective emergency rescue if needed.

Subp. 8. Respirator requirements.

A. Atmosphere-supplying respirators must be supplied with respirable air of Grade D quality or better as defined in "Commodity Specification for Air G-7.1," Compressed Gas Association (1997), as included in Code of Federal Regulations, title 29, section 1910.134. Grade D quality air criteria include:

- (1) oxygen content (v/v) of 19.5 to 23.5 percent;
- (2) hydrocarbon (condensed) content of five milligrams per cubic meter of air or less;
- (3) carbon monoxide content of ten parts per million or less;
- (4) carbon dioxide content of 1,000 parts per million or less; and
- (5) lack of noticeable odor.

B. A licensee must ensure that no objects, materials or substances, such as facial hair, or conditions that interfere with the face-facepiece seal or valve function and that are under the control of the respirator wearer are present between the skin of the wearer's face and the sealing surface of a tight-fitting respirator facepiece.

Subp. 9. Dose calculation. In estimating the dose to individuals from intake of airborne radioactive materials, the concentration of radioactive material in the air that is inhaled when respirators are worn is initially assumed to be the ambient concentration in air without respiratory protection, divided by the assigned protection factor. If the dose is later found to be greater than the estimated dose, the corrected value must be used. If the dose is later found to be less than the estimated dose, the corrected value may be used.

Statutory Authority: *MS s 144.1202; 144.1203*

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