

WAC 246-221-117 Use of individual respiratory protection equipment. If the licensee assigns or permits the use of respiratory protection equipment to limit the intake of radioactive material:

(1) The licensee shall use only respiratory protection equipment that is:

(a) Tested and certified by the National Institute for Occupational Safety and Health (NIOSH); or

(b) Approved by the department on the basis of the licensee's submittal of an application for authorized use of other respiratory protection equipment, including a demonstration by testing, or a demonstration on the basis of reliable test information, that the material and performance characteristics of the equipment are capable of providing the proposed degree of protection under anticipated conditions of use.

(2) The licensee shall implement and maintain a respiratory protection program that includes:

(a) Air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate exposures;

(b) Surveys and bioassays, as appropriate, to evaluate actual intakes;

(c) Testing of respirators for operability (user seal check for face sealing devices and functional check for others) immediately prior to each use;

(d) Written procedures regarding:

(i) Monitoring, including air sampling and bioassays;

(ii) Supervision and training of respirator users;

(iii) Fit testing;

(iv) Respirator selection;

(v) Breathing air quality;

(vi) Inventory and control;

(vii) Storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment;

(viii) Recordkeeping; and

(ix) Limitations on periods of respirator use and relief from respirator use;

(e) Determination by a physician that the individual user is medically fit to use respiratory protection equipment:

(i) Before the initial fitting of a face sealing respirator;

(ii) Before the first field use of nonface sealing respirators;

and

(iii) Either every twelve months thereafter, or periodically at a frequency determined by a physician; and

(f) Fit testing, with a fit factor greater than or equal to ten times the APF for negative pressure devices, and a fit factor greater than or equal to five hundred 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.

(3) The licensee shall 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 relief.

(4) The licensee shall also consider limitations appropriate to the type and mode of use. When selecting respiratory devices the licensee shall provide for vision correction, adequate communication,

low temperature work environments, and the concurrent use of other safety or radiological protection equipment. The licensee shall use equipment in such a way as not to interfere with the proper operation of the respirator.

(5) 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. The standby persons must be equipped with respiratory protection devices or other apparatus appropriate for the potential hazards. The standby rescue persons shall observe or otherwise maintain continuous communication with the workers (visual, voice, 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. 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.

(6) Atmosphere-supplying respirators must be supplied with respirable air of grade D quality or better as defined by the Compressed Gas Association in publication G-7.1, "Commodity Specification for Air," 1997 and included in the regulations of the Occupational Safety and Health Administration (29 C.F.R. 1910.134 (i)(1)(ii)(A) through (E)). Grade D quality air criteria include:

(a) Oxygen content (v/v) of 19.5-23.5%;

(b) Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;

(c) Carbon monoxide (CO) content of 10 ppm or less;

(d) Carbon dioxide content of 1,000 ppm or less; and

(e) Lack of noticeable odor.

(7) The licensee shall ensure that no objects, materials or substances, such as facial hair, or any conditions that interfere with the face-to-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.

(8) 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.

(9) The department may impose restrictions in addition to the provisions of this section, WAC 246-221-113 and 246-221-285, in order to:

(a) Ensure that the respiratory protection program of the licensee is adequate to limit doses to individuals from intakes of airborne radioactive materials consistent with maintaining total effective dose equivalent ALARA; and

(b) Limit the extent to which a licensee may use respiratory protection equipment instead of process or other engineering controls.

(10) The licensee shall obtain authorization from the department before using assigned protection factors in excess of those specified in WAC 246-221-285. The department may authorize a licensee to use higher assigned protection factors on receipt of an application that:

(a) Describes the situation for which a need exists for higher protection factors; and

(b) Demonstrates that the respiratory protection equipment provides these higher protection factors under the proposed conditions of use.

[Statutory Authority: RCW 70.98.050. WSR 01-05-110, § 246-221-117, filed 2/21/01, effective 3/24/01; WSR 98-13-034, § 246-221-117, filed 6/8/98, effective 7/9/98; WSR 94-01-073, § 246-221-117, filed 12/9/93, effective 1/9/94.]