

Respiratory Protection Program

This is a mandatory program. Personnel must comply with the Respiratory Protection Program as outlined below:

- a. Respirators are considered an acceptable method of protecting the health of Department of Army personnel when the Safety Director (SD)/Industrial Hygienist (IH)/Occupational Health Nurse (OHN) determine that the following conditions exist:
 1. Routine operations in which there are no feasible engineering controls and/or work practices that would adequately eliminate exposure to the hazard if used.
 2. Intermittent, non-routine operations (such as those not exceeding 1 hour/day or 1 day/week) when there are no feasible engineering controls and/or work practices available that would adequately control exposure to the hazard.
 3. Interim periods when engineering controls are being designed and installed.
 4. Emergencies.
 5. Federal regulation or operating license requires use of respirators.
- b. Where economically feasible and the technology exists for eliminating or reducing the cause of an environmental respirator hazard, the following engineering control methods will be implemented:
 1. Substitution of less toxic substances.
 2. Installation of local exhaust systems.
 3. Natural or mechanical ventilation.
 4. Segregation or isolation of processes or operations.
- c. Respiratory protection will be furnished at no cost to the employee and will be used as a condition of employment when required by the job. Employees hired after 12 Dec 94 will be required to shave facial hair to wear the facial seal respirator or if it interferes with the valve functions.

Procedures

- a. Selection of respiratory protection equipment.
 1. All respirators procured for use will be approved respirators (tested and listed as satisfactory jointly by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA)). Any modification that is not authorized by these agencies voids the approval of a respirator. Component replacement, adjustments, or repair will follow the manufacturer's recommendations only. A respirator is approved as a whole unit with specific components.
 2. The correct respirator for each job will be specified by PMS based on environmental evaluations and requirements contained in OSHA 29 CFR 1910, Subpart Z.
 3. Industrial respirators (negative pressure types) are not to be used in confined spaces or where concentrations of contaminants are immediately dangerous to life or health (IDLH), or in any atmosphere containing less than 19.5 percent oxygen. For entry into confined space or IDLH atmospheres, only self-contained breathing apparatus or supplied airline respirators will be used, and then only where specific controls and requirements are applied, where experts have been consulted, and written procedures developed to ensure safe operation. Regulations require anyone planning any confined space entry to contact the Garrison Safety Office - Fort Knox, 4-4920.
 4. In the event an employee desires not to wear a facial respirator, the unit/activity will negotiate with the union possible optional respiratory equipment. This applies only for employees in which respirator use is not a condition of employment.
 5. The respirator does not provide protection to exposed areas of the body against vapors, gases, and airborne particulate matter that irritates the skin or that may be absorbed by the body through penetration of the skin, the use of specialized hand and/or body coverings may be required for protection.
- b. Use of respiratory protection equipment:
 1. Where practical, a respirator will be assigned to an employee for their exclusive use.

2. Supervisors will ensure that permanently assigned respirators are marked to indicate to whom it is assigned. The mark will not affect the respirator performance in any way. The issue date will be recorded on inventory maintained by the supervisor.
- c. Initial and annual respiratory protection training and respiratory fit testing will be conducted by Garrison Safety Office - Fort Knox, and/or unit respirator specialist.
 - d. Contact lenses will not be worn with full-face-piece respirators, helmets, hoods or suits.
 - e. Each area and operation requiring respirators will be marked to inform personnel of the work hazards or health risks involved and the type of respirator required.
 - f. Testing for fit.
 1. Fit testing will be conducted annually. In addition, fit testing will be repeated whenever there is physical changes that could affect respirator fit, i.e., facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight. Any individual with facial hair (stubble beard growth, beard, mustache or sideburns) which protrude into the sealing surface, as determined by the IRS, will be refused a fit test. Fitting will be based on clean shaven face only.
 2. Before entering an area containing a hazardous atmosphere, the respirator wearer should test the tightness of the seal by performing one of the tests below:
 - Positive Pressure Fit Check.
 - Place thumb through large opening in exhalation valve guard to close the exhalation valve.
 - Exhale.
 - If the mask bulges slightly and there is no evidence of air leaks, a tight fit has been obtained.
 - If an air leak is detected, reposition the mask and/or tighten straps and repeat the test.
 - Negative Pressure Fit Check.

- Place palms of hands over opening on filters and inhale for 5-10 seconds.
- If mask collapses, you have a good seal.
- If an air leak is detected, reposition the mask and/or adjust straps. Repeat the test.

g. Inspection, Maintenance and Care of respirators:

1. When a respirator is issued to an individual, that person is responsible for the primary maintenance and care of that respirator. Where respirators are used collectively or kept ready for emergencies by a shop or operating activity, the work area supervisor is responsible for establishing the respirator maintenance and cleaning program. This program will be adjusted for the number of types of respirators in use, working conditions, and hazards involved and will include the basic services of inspection for defects, cleaning and disinfecting, repair, and storage. Equipment will be properly maintained to retain its original effectiveness.
2. No attempts will be made to replace components or to make adjustments or repairs to mask beyond the manufacturer's recommendations. If mask is unserviceable, turn the mask into the IRS for disposal.
3. All respirators will be inspected routinely before and after each use and during cleaning. A respirator that is not routinely used but kept ready for emergency use will be inspected after each use and at least monthly to ensure that it is in satisfactory working condition using the following steps:
 - Examine the face piece for: Excessive dirt, cracks, tears, holes, or distortion from improper storage or inflexibility.
 - Examine the head straps or head harness for: Breaks, loss of elasticity, broken or malfunctioning buckles and attachments.
 - After removing the cover, examine the exhalation valve for the following:
 - Foreign material, such as detergent residue, dust particles or human hair under the valve seat.

- Cracks, tears, distortion in the valve material, or improper insertion of the valve body in the face piece.
- Cracks, breaks, or chips in the valve body, particularly in the sealing surface.
- Missing or defective valve cover or improper installation of the valve body.

4. Examine the air-purifying elements for:

- Incorrect cartridge, canister, or filter for the hazards.
 - Incorrect installation, loose connections, missing or worn gaskets, or cross thread in holder.
 - Expired shelf-life date on cartridge or canister.
 - Cracks or dents in outside case of filter, cartridge, or canister.
 - Evidence or prior use of sorbent cartridge or canister, indicated by absence of sealing material, tape, foil, etc. over inlet.
- h. A monthly inspection will be conducted on all self-contained breathing apparatus type respirators. Air and oxygen cylinders will be fully charged according to the manufacturer's instructions, and it will be determined that the regulator and warning devices function properly.
- i. Respirators issued to specific individuals will be cleaned and disinfected as frequently as necessary to ensure that skin penetrating and dermatitis-causing contaminants are removed from respirator surfaces. Respirators maintained for emergency use or used by more than one person will be cleaned and disinfected after each use.
- j. Cleaning and Disinfecting.
1. The following approved procedures will be used for cleaning and disinfecting respirators:
 - Remove any filters, cartridges, or canisters. *NOTE: Do not submerge in cleaning or disinfecting solution.*
 - Wash the face piece and breathing tube in a cleaning solution of one-tablespoon dishwashing soap to one-gallon warm water. To

disinfect the face piece and breathing tube use 2 tablespoons of household bleach to one gallon of warm water.

- Rinse completely in clean, warm water.
 - Air dry in a clean/non-contaminated atmosphere.
 - Clean other respirator parts as recommended by the manufacturer.
 - Insert new filters, cartridges, or canisters as specified by the manufacturer and ensure the seal is tight. Filter assemblies will be replaced if the wearer notices any odor, difficulty in breathing, or ill effects from fumes.
2. After inspection and cleaning, respirators will be stored to protect them against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals. Respirators placed at stations and work areas for emergency use will be stored in compartments built for the purpose. The compartments must be clearly marked to indicate their content and must be quickly accessible at all times. Routinely used respirators may be stored in plastic bags; however, respirators will not be stored in such places as lockers or toolboxes unless they are in containers or cartons. Respirators will be placed or stored so that the face piece and exhalation valve will rest in a normal position in order not to impair the respirator function by affecting its physical configuration.