

The University of Montana Safety Manual - Chapter 13

13. RESPIRATORY PROTECTION PROGRAM for THE UNIVERSITY OF MONTANA

The intent of this written program is to define the rules regarding the use of respirators for personal protection as stated in OSHA 29 CFR 1910.134. Strict adherence to the provisions contained in this program is necessary to prevent exposure to potentially hazardous airborne contaminants.

13.1 RESPIRATOR STANDARD OPERATING PROCEDURES

A. Respirators shall be provided by the employer when deemed necessary to protect the health of the employee. Employee protection through the use of engineering controls, well designed work practices, the use of lower-toxicity materials, or some combination of these shall be emphasized before respirator usage.

Environmental Health will require respirator use only when it has been determined that there is no other feasible control method. Optional usage will be at the discretion of the respective department. If an employee dons a respirator, whether required or optional, it is the responsibility of the respective department to comply with all components of the Respiratory Protection Program and bear the associated costs.

B. Training and fit testing for respirator use will be conducted by Environmental Health on a yearly basis or as necessary. The Respiratory Program administrator is Kay Altenhofen from the Environmental Health and Risk Management Office.

C. All new personnel who wear a respirator will be required to complete a medical questionnaire (Appendix C) which will be reviewed by a Physician or other Licensed Health Care Professional (PLHCP). A follow-up medical examination will be provided for any employee who gives a positive response to any question 1 through 8 in section 2, Part A of Appendix C. This is addressed further in the medical surveillance portion of the written program.

D. Employees are responsible for proper use and maintenance of respirators in accordance with training received.

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13.2 SELECTION OF RESPIRATORS

A. The Environmental Health Office will select the proper respirator and cartridges given the exposure potential based on the NIOSH Guide to Selection of Respirators certified under 42 CFR 84, a copy of which follows in the Respirator Selection part of the program.

B. Only NIOSH approved respirators have been chosen for use in this program. The University will provide several respirator models and sizes from a supply maintained in Campus Store's warehouse area or the wearer can supply their own.

C. Cartridge schedule change will vary in each workplace, but at a minimum of annually as part of the fit test program.

D. APR high efficiency respirators and disposable dust/mist masks have the following limitations that must be taken into consideration when selecting a respirator.

1. Not for use in oxygen deficient areas (less than 19.5% by volume).
2. Not for use in immediately dangerous to life or health (IDLH) concentrations.
3. Cannot be used for protection against gases and vapors with poor warning properties unless equipped with an end of service life indicator.
4. Half face respirators offer no eye protection and may require the use of safety goggles or substitute a full-face respirator.

13.2 TRAINING OF EMPLOYEES

A. Each respirator user will be trained in the proper use and maintenance of the respirator prior to fit testing by the Program Administrator. Employee training will be somewhat different for each respirator user dependant on the hazard, but all training will include the following information:

1. An explanation of why a certain respirator was selected and the function, capabilities and limitations of the respirator.
2. Instruction on donning the respirator and checking it fits, which will be accomplished by doing both a positive and negative pressure check.
3. Instruction on proper use, maintenance and cleaning of a respirator.
4. Instruction as needed for special respirator use, including recognizing and handling emergency situations.
5. Regulations concerning respirator use.

13.3 FITTING OF RESPIRATOR

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A. Proper fitting of respirators is essential if employees are to receive the protection for which this program is designed. Environmental Health will give a fit test to each respirator wearer. The procedures found in 29 CFR1910.134 Appendix A shall be followed; a copy of which is available at EHRM. In order to ensure a good face seal each time a respirator is worn, the following must be observed:

1. The respirator and straps must be in place and worn in the appropriate position. To adjust headbands, pull the free ends tight until a comfortable fit is obtained. All straps shall be secure. The respirator should not be over tightened so as to be uncomfortable on the face.
2. To adjust face piece properly, simply position chin firmly in cup and manually shift mask until the most comfortable position is located. Make final adjustments in the headband and do not break the nasal seal.
3. Facial hair must not interfere with the face seal, since proper fit cannot be assured. Other conditions that may prevent adequate face-to face piece seal such as sideburns, absence of one or both dentures, or temple bars on glasses (when wearing full face respirators).
4. Proper fit must be checked *each* time the respirator is worn. This is accomplished by performing a negative and positive fit check.

Negative Pressure Check

1. Cover the cartridges/canister with the palms of your hands.
2. Inhale **gently** until the face piece collapses slightly. If the face piece remains slightly collapsed and no inward leakage is observed, the respirator is properly fitted.

Positive Pressure Check

1. Cover the exhalation valve with your palm.
2. Exhale **gently** until positive pressure builds in the face piece. Do not blow hard as this will cause leaks.
3. If no outward leakage is noted, the respirator is fitted properly.

13.4 CARE AND MAINTENANCE OF RESPIRATORS

A. Cleaning and Disinfecting

The employee is responsible for the cleanliness and maintenance of their own respirator. Respirators should be cleaned on a regular basis. If respirators are used only occasionally less frequent cleaning is acceptable. A general rule of thumb is cleaning after 8 hour of use. The following general cleaning procedure should be used.

1. Remove cartridges, filters, valves, and straps.
2. Wash face piece and accessories (not cartridges) in warm soapy water. Gently scrub with a brush. A disinfecting rinse is not absolutely necessary if the

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respirator is to be used by the same worker, however, where individual use is not practiced, disinfection is recommended. Disinfection can be accomplished by preparing a weak solution (100ppm) of household bleach and water and immersing the respirator for two minutes.

3. Rinse parts with clean water. A thorough rinsing is needed to remove all traces of detergent, sanitizer and disinfectant. This is very important to prevent dermatitis.
4. Air dry in a clean place or wipe dry with a clean, lintless cloth.
5. Inspect for wear or defects and reassemble.
6. Store in a clean plastic bag until needed.

B. Inspection

All equipment must be inspected before and after each use. Respirators should be inspected for the following:

1. Tightness of connections
2. Conditions of face piece
3. Condition of headbands
4. Condition of cartridges
5. Condition of valves
6. Rubber or elastomer for pliability
7. Rubber or elastomer for deterioration

If any part of the respirator is unacceptable replace that part or the entire respirator before use. Remember, wearing poorly maintained or malfunctioning respirators may be more dangerous than not wearing a respirator at all.

13.4 MEDICAL SURVEILLANCE

1. Employees shall not be assigned to tasks requiring use of a respirator unless it has been determined that they are physically able to perform the work and use the equipment.
2. All new personnel who wear a respirator will be required to complete a medical questionnaire (Appendix C) which will be reviewed by a Physician or other Licensed Health Care Professional (PLHCP). A follow-up medical examination will be provided for any employee who gives a positive response to any question 1 through 8 in section 2, Part A of Appendix C.
3. Additional medical evaluations shall be provided if an employee reports medical signs or symptoms that are related to the ability to wear a respirator. A PLHCP, or Program Administrator informs the employee that they need to be reevaluated, or changes occur in the workplace such as temperature, work effort, PPE, etc.

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4. Records of all physicians' respiratory approvals become a part of the employee respirator file at the Environmental Health Office. They will be maintained in a confidential manner for a period of at least thirty years after termination.

13.5 RESPIRATOR PROGRAM EVALUATION

A. The Environmental Health office shall monitor the effectiveness of this program by appropriate surveillance of work areas where respirators are being used. This will include not only observation, but discussion with employees to confirm proper use. There will also be periodic discussions with foreman during scheduled meetings.

Questions concerning the Respiratory Protection Program should be directed to your supervisor and/or Kay Altenhofen, Environmental Health and Risk Management Office at 243-4503.