



Angelo State University Operating Policy and Procedure

OP 34.05: Respiratory Protection Program

ORIGIN

DATE: September 1, 2007

LAST

REVIEW: November 4, 2011

PURPOSE: The purpose of the Angelo State University (ASU) respiratory protection program is to ensure the protection of all employees who are required to wear a respirator while performing their duties.

REVIEW: This OP will be reviewed in November of odd-numbered years by the director of environmental health, safety, and risk management (EHS&RM) with recommended revisions forwarded through the vice presidents to the president by December 15 of the same year.

POLICY/PROCEDURE

1. Intent

The employee protection will be accomplished by complying with guidance in 29 CFR 1910.134 and 1910.1001, 40 CFR 763.121 Subpart G, NIOSH *Guide to Industrial Respiratory Protection*, and ANSI Standard Z88.2-1992. No employee will be given a respirator or instructed to use one without approval from EHS&RM. Respirators shall be used only where engineering or administrative controls are not practical or while engineering controls are being installed.

2. Responsibilities

Angelo State University EHS&RM is the authority for approving respirators and monitoring their use. The Safety Specialist is the approval authority for requests to use respirators and direct employees into the program. EHS&RM will maintain copies of medical qualification statements, training, and fit testing for 40 years or 20 years following termination of employment, whichever is longer. Supervisors and users of respirators in each department will be responsible for following this OP and guidance provided by EHS&RM and developing a written program detailing the specifics of respirator use, maintenance, cleaning, and storage in their work environment.

3. Training

All employees required to wear a respirator will be trained annually in the proper use and limitations of the equipment. The training will be conducted by EHS&RM. At the time of initial training, each respirator user will be given a copy of the pamphlet (*The Basics of*

Respiratory Protection: What You Should Know.) The employee must be given time to handle the respirator and wear it in a normal air situation. He/she must adjust the equipment until it is comfortable and wear the mask for at least five minutes before a fit check is performed. Those employees required to wear respirators in IDLH (immediately dangerous to life or health) atmospheres shall be trained in rescue procedures.

Training will include the following:

- The nature of respiratory hazards and what could happen if respiratory protection is not worn properly;
- Engineering and administrative controls being used and the added protection of the respirator;
- Reasons for the selection of respirator types;
- The limitations of the respirator;
- Methods for donning and checking for proper fit; and
- Proper maintenance, cleaning, sanitizing, and storage of respirators.

4. Fit Testing

Fit testing will be performed by EHS&RM to ensure all employees required to wear respirators have equipment that fits and functions properly. This will be performed on a yearly basis. The following are some factors to be considered regarding respirator use and fit testing.

- a. Facial Hair - Any facial hair along the sealing area of the respirator such as beards, sideburns, moustaches, or even a few days growth of stubble will not be permitted on employees who are required to wear a respirator. This facial hair will prevent a good face-to-face piece seal. EHS&RM will not approve or fit test employees for respirator use if interfering facial hair is present. The supervisor must not allow a worker to enter a contaminated work area when conditions prevent a good seal of the respirator.
- b. Eyeglasses - Ordinary eyeglasses should not be worn with a full-face respirator because the temple bars will prevent a good face-to-face piece seal of the mask. Special corrective lenses are available that can be mounted inside the mask.
- c. Contact Lenses - Wearing contact lenses is acceptable while using a respirator.
- d. Facial Abnormalities - Facial abnormalities such as scars, deep skin creases, prominent cheekbones, severe acne, or the lack of teeth or dentures can prevent a respirator from sealing properly.

During fit testing, the employee shall be trained on how to don and adjust the respirator correctly. After donning and adjusting the mask, the employee shall perform positive and negative pressure checks. To perform a positive pressure check, the employee shall seal the exhalation valve with the hand and exhale lightly into the mask. This should cause the mask to expand without leaking around the seal. If there is a leak, the mask must be reset to the

face to obtain a good seal. In order to perform a negative pressure check, the employee shall seal the inhalation ports or filters and draw air into the lungs to cause the mask to collapse on the face. If the mask holds this position until the employee exhales, the fit is good. EHS&RM will perform a quantitative fit test on the employee because this type of test offers the most accurate, detailed information on respirator fit. It measures particles in the outside air and inside the respirator while the wearer performs exercises that could induce face piece leakage. The particle count outside and inside the face piece is then compared and a fit factor calculated.

5. Medical Examinations

Persons assigned to tasks that require wearing a respirator must be physically able to perform the work while using the respirator. Every year, each respirator wearer must obtain a physician's statement of medical qualification to wear a respirator. This may be accomplished through a medical examination or use of the questionnaire in CFR 29, Part 1910, Subpart I, 134, Appendix C, which is then evaluated by a physician or other licensed health care professional. The supervisor will be responsible for ensuring each employee has this statement and brings a copy to the fit test procedure when a new physician's statement is received. No employee will be approved or fit tested for respirator use by EHS&RM without a current physician's statement that he/she is medically qualified to perform his/her duties while wearing a respirator.

6. Inspection, Cleaning, Maintaining, and Storage

- a. All respirators must be inspected for wear and deterioration of their components before and after each use. Special attention should be given to rubber, silicone, or plastic parts that can deteriorate. The face piece, especially the sealing surface, headband, valves, and filters, must be in good condition. All self-contained breathing apparatus must be inspected at least monthly. Air cylinders must be fully charged at all times. Regulators and warning devices must be checked to ensure their proper function. Records must be kept of inspection dates and findings. Cylinders may only be filled with air that meets the standards for grade D medical or breathing air. Gaskets, seals, fittings, and regulators shall be inspected on all powered air-purifying respirators (PAPR) and air-line respirators before and after each use.
- b. Chemical cartridges and filters shall be replaced at least every 20 hours of service or sooner if needed. Respirator repairs must be made only by experienced persons and using only parts from the same manufacturer specifically for that respirator model. Respirators shall be cleaned after each use. This can be done with towelettes or cleaning solution designed for that purpose. In addition to this cleaning, respirators shall be disassembled, thoroughly cleaned, and sanitized at least twice a year (more often if used in very dirty environments). This will prolong the life of the respirator and lessen the chances of constant re-infection if the employee contracts a cold or other virus. The cleaning and sanitizing shall be accomplished as follows:
 - Remove all filters and cartridges.
 - Disassemble the respirator.
 - Wash the respirator in a mild soap solution using a sponge or soft brush.
 - While the respirator is disassembled, inspect it and replace any worn parts.

- Rinse in clean, warm, running water.
 - A thorough rinse will remove all soap solution that might irritate the face or damage the respirator.
 - To disinfect the respirator, add one tablespoon of household bleach per gallon of water in a sink or container.
 - Immerse the respirator parts in this solution and allow to stand for five minutes.
 - Remove parts, thoroughly rinse under warm, running water.
 - Allow to air-dry or blot dry with a clean, lint-free cloth.
 - Reassemble the respirator.
 - At least once a year, the inhalation and exhalation valves must be replaced during the cleaning procedure.
- c. Respirators must be stored in a manner to protect against dust, sunlight, extreme heat or cold, excessive moisture, or damaging chemicals. A heavy-duty resealable plastic bag is recommended for respirator storage. Store the respirator in a position to prevent mechanical damage from occurring. Respirators shall be stored so that face pieces and exhalation valves rest in a normal position to prevent the mask from becoming deformed. Respirators shall never be hung from their straps or stored in a contaminated environment.

7. Respirator Use and Approval

Only respirators approved and fit tested by EHS&RM will be used at the university. All respirators, other than those for emergency use, will be issued on an individual basis. No respirators will be shared among employees. As part of the fit test, EHS&RM will provide specific information about the manufacturer's respirator, model, size, and cartridges the employee is authorized to wear. This combination of equipment will be selected to protect the employee from the hazards identified in his/her work environment. It should never be used as protection against any other hazards. If an employee encounters new or unusual hazards, he/she should contact EHS&RM for advice concerning protection from those hazards. The employee should not assume his/her respirator provides protection. The selection of respiratory protection equipment will be based on the characteristics of the hazardous substance, the concentration present, and the limitations of the respiratory protection equipment itself.