RESPIRATORY PROTECTION

The Respiratory Protection Program was established to ensure that workers receive the proper respiratory protection device when required and that respirator wearers are properly fitted and trained in the care, use, and maintenance of the assigned respirator.

1. REFERENCES:

1.1. 29 CFR 1910.134, Respiratory Protection

1.2. AFOSH Std 48-1, Respiratory Protection

2. RESPIRATOR TYPES : The Bioenvironmental Engineering Flight has authorized the use of the following respirators:

TYPE	NIOSH APPROVAL #	PROCESS/CHEMICALS
3M Full face	TC 23C-123 w/prefilter 23C-47	

3. RESPONSIBILITIES:

3.1. Bioenvironmental Engineering:

3.1.1. Will determine the need for and type of respirator required by personnel.

3.1.2. Will conduct initial training, selection, and fit testing of individuals requiring respirators with the exceptions as stated in WAFBI 48-1, para 2.

3.1.3. Will conduct annual fit testing and training with the exceptions as stated in WAFBI 48-1, para 2.

3.1.4. Will conduct yearly inspections of the shop's Respiratory Protection Program to determine effectiveness of the program.

3.2. Supervisors:

3.2.1. Provides directions on how the maintenance, cleaning, and storage of respirators are carried out using attachments one and two of this OI.

3.2.2. Stresses the need to inform the supervisor of any problems experienced by personnel while wearing respirators.
3.2.3. Will attach the AF Form 2772, Certificate of Respirator Fit Test to the AF Form 55, Employee Safety and Health Record.

3.2.4. Will ensure that inspection of all emergency use respirators is accomplished and documented each month on the AF Form 1071, Inspection Maintenance Record.

3.2.5. Will ensure that AFOSH Std 48-1 is maintained within the shop and all requirements of that standard are met, as it applies to the shop.

3.2.6. Will ensure that respirators are accessible to Bioenvironmental Engineering to perform inspections on the storage and cleanliness of the respirators.

3.2.7. Will ensure that cartridges are maintained and changed per the manufacturers recommendations.

3.2.8. Will ensure that all breathing air analysis is forwarded to Bioenvironmental Engineering for review within two weeks of receipt.

3.3. Personnel:

3.3.1. Will perform a respirator inspection, positive and negative fit test using attachment 1 with each donning of the respirator.

3.3.2. Using the instructions of attachment 2, will perform cleaning after each use when the respirator is assigned as a multi-user device or worn infrequently. Daily cleaning will be accomplished if the respirator is worn daily, and is not worn by more than one user. Weekly cleaning is appropriate for respirators that are worn two to four hours per week and are not worn by more than one user.

3.3.3. Will store respirators in a plastic bag, with the cartridge side down, so distortion of the facepiece is kept to a minimum. Respirators will also be stored in an area free of contaminants such as a locker. Storage in tool boxes is not permitted as this tends to distort the face piece and subjects the respirator to weather, wear, and tear.

3.3.4. Eye glasses with frames that degrade the integrity of the face to respirator seal and contact lenses will not be worn.

NCOIC, OIC, or Commanders Signature Block

Attachments:
1. Respirator Fit Test Procedures
2. Cleaning Procedures

Approved/Disapproved

Leave Blank for Bioenvironmental Engineering Representative Signature Block

Attachment 1

RESPIRATOR FIT TEST PROCEDURES

1. Usage: Before each use of a respirator, the wearer shall perform the following procedures:

1.1. Inspection.

1.2 Check all parts for wear or defects.

1.3. Check to insure the proper cartridges are on the respirator.

1.4. Cartridges and worn parts are replaced if needed.

1.5. Leakage Test.

1.5.1. Positive Pressure Test: Close the exhaust valve and exhale gently into the face-piece. The respirator fit is considered satisfactory if a slight positive pressure can be built up inside the respirator without any evidence of outward leakage of air at the seals. For some respirators, this method will require the wearer to first remove the exhaust valve cover and then replace it after the test.

1.5.2. Negative Pressure Test: Close off the inlet opening of the filters, canisters, or cartridges by covering with the palm of the hand. Inhale gently and hold the breath for 10 seconds. If the face-piece remains in a slightly collapsed condition and no inward leakage of air is detected, the respirator and fit is considered satisfactory.

2. Replacement of Cartridges, Filters, and Canisters:

2.1. Check the manufacturer's recommended shelf life or the end of life service indicator.

2.2. When the wearer detects a resistance in breathing or an extra effort is needed to inhale.

2.3. When the wearer detects an odor or smells the chemicals being used. In all cases, regardless of how the wearer has detected the end of the service life of the filters, canisters, or cartridges, they should immediately exit the operation area. If inside, correct the problem and perform all the necessary checks prior to entry/reentry.

2.4. Change filters prior to respirator use or if it has not been used within a four week period.

2.5. When Bioenvironmental specifies a cartridge change period based upon contaminant concentration.

3. Safety Precautions: Before starting any hazardous operations, employ the following safety measures.

3.1. Be sure the respirator functions properly.

3.2. Do not perform any hazardous duties unless you feel you are medically qualified and properly trained.

Attachment 2

CLEANING PROCEDURES

1. The following procedure is recommended for cleaning and disinfecting respirators:

1.1. Remove any filters, cartridges, or canisters.

1.2. Wash face-piece and breathing tube in a cleaner-disinfectant solution.

1.3. Commercially prepared cleaner disinfectant solutions may be used (follow manufacturers instructions) or respirators may be washed in a liquid detergent solution, then dipped in one of the following disinfectant solutions:

1.3.1. Hypo chlorite solution (50 ppm chlorine) for two minutes. 13 oz of household bleach to each gallon of water will equal approximately S0 ppm chlorine.

1.3.2. Aqueous iodine solution (50 ppm) for two minutes.

1.3.3. Ouaternary ammonium solution (200 ppm of Ouatenary ammonium compounds in water with less than 500 ppm hardness) for two minutes.

1.4. Rinse completely in clean, warm water which is < 120°F.

1.5. Air dry in a clean area.

1.6. Clean other respirator parts as recommended by the manufacturer.

2. Insert new filters, cartridges, or canisters periodically as specified by the manufacturer. Make sure seal is tight.

3. Place in plastic bag or other closed container for storage.

4. Hypo chlorite and iodine solutions or iodine compounds can damage respirator parts by aging rubber and corroding metal parts if immersion times are extended. Ouaternary ammonium compounds can cause dermatitis if not completely rinsed from the respirator. Solvents, temperatures above 120°F, and vigorous mechanical agitation should not be used.

S. Respirators contaminated with organic phosphate pesticides should be decontaminated as follows:

5.1. If contamination is light, normal cleaning procedures should provide satisfactory decontamination.

5.2. Organic phosphate pesticides should be removed by an alkaline soap wash and 50 percent isopropyl or ethyl alcohol rinse followed by the normal cleaning procedures.