

# UNIVERSITY OF SOUTH ALABAMA

## Respiratory Protection Program - Procedures

### I. Selection, Issuance, and Training Practices

#### A. Selection of Respirator

- Respirator type and make will be selected by the individual assigned to oversee the department's respirator protection program.
- Only respirators approved by the National Institute of Occupational Safety and Health (NIOSH) will be approved by Safety and Environmental Compliance for use by USA employees.
- The proper type of respirator for the specific hazard involved will be selected in accordance with the manufacturer's instructions.

#### B. Issuance of Respirator

- Management reserves the right to determine if a respirator is needed.
- Air sampling data may and will be taken as necessary to determine whether a respirator is needed.
- Employees may, depending on the type of hazard, be required to wear breathing zone sampling devices for periods of time when air sampling studies are being conducted.
- Prior to fit testing an employee for a respirator, the employee must complete a confidential Pre-Respirator Fit Test Medical Questionnaire.
- The completed questionnaire will be evaluated and based on the employee's responses to the questions, the employee will be either approved for respirator fit testing or referred to his/her personal physician for further medical evaluation to determine if the employee can safely wear a respirator.
- A written recommendation/clearance from the physician must be provided prior to fit testing.

#### C. Training Practices

- Training will be job specific depending upon the nature of the hazards and exposure that may result if the respirator is not used, or not used properly.
- An explanation of engineering control deficiencies and why the respirator and/or filter is required for use in the particular environment will be discussed with employees.
- Instructions in determining the proper type of respirator for the particular hazard will be provided by the Safety and Environmental Compliance department.
- Detailed instructions are to be given as to inspection, care and cleaning requirements.
- Respirator capabilities and limitations will be defined.
- Instructions and training in how to don, change filters/cartridges and remove respirators will be provided with on site observations to verify competencies.

- Training shall provide the employee an opportunity to handle the respirator, have it fitted properly, test its face piece seal, to wear for familiarity, and to test for fit (qualitatively for N-95's and quantitatively for half and full face masks).
- Employee fit testing and training are provided by the University's Safety and Environmental Compliance department upon request. USA Health provides/manages their own program.
- Any other emergency or special instructions.

## **II. Maintenance and Care of Respirators**

### **A. Inspection**

- All respirators shall be inspected before and after each use.
- Respirators kept for emergency use must be inspected after each use to assure that they are in satisfactory working condition.
- A record shall be kept of inspection dates and findings for respirators maintained for emergency use.

#### **Respirator inspection(s) shall include:**

- Check of the tightness of connections and the condition of the face piece.
- Check of the headbands.
- Check of the valves.
- Check of the connecting tube and cartridges, canisters or filters.
- Rubber or elastomer parts shall be checked for pliability and deterioration.
- Filter time and condition.

### **B. Cleaning and Disinfection**

- Respirators shall be cleaned after each use.

#### **Cleaning Procedures:**

1. Remove any filters, cartridges, headbands, and disassemble the major respirator parts.
2. Wash all respirator parts in a cleaner/disinfectant solution at or about **120°F**. Use a soft hand brush to remove dirt. Filters and cartridges are not to be washed.
3. Rinse completely in clean, warm water.
4. Air dry in clean area.
5. Inspect all parts, replace with new parts if defective.
6. Reassemble the respirator. Make sure the seal/connection is tight.
7. Place the respirator in a new plastic bag and seal it for storage.
8. Disposable type respirators shall not be used for more than 8 working hours and can be disposed of through the appropriate waste stream. Disposal and requesting of a new respirator will be the employee's responsibility.

### **C. Repair of a Respirator**

- Repair or replacement shall be done only by trained persons with approved replacement parts designated for the respirator.
- Document all product repairs and replacements.
- No attempts shall be made to replace components or to make adjustment or repairs beyond the manufacturer's recommendation.
- Defective valves or regulators shall be returned to the manufacture or to a trained technician for repair or replacement.
- Defective equipment storage and shipping containers must be clearly marked defective to prevent other personnel from utilizing.

### **D. Storage of Respirators**

- After inspection, cleaning, and necessary repairs, respirators shall be stored in such a manner that protects against dust, sunlight, heat, extreme cold, excessive moisture or damaging chemicals.
- Respirators stored in work areas for emergency use should be stored in compartments built for that purpose, be quickly accessible at all times, and be clearly marked.
- Routinely used respirators, such as dust/particulate respirators, may be placed in "zip lock" plastic bags.
- Respirators shall not be placed in lockers or tool boxes unless they are in a protective packaging.
- Respirators shall be packed or stored so that the face piece and exhalation valve will rest in a near normal position.
- Filter should be removed and stored separately to avoid crushing the filters and warping the face piece.
- Once a filter has been removed from its original package, it should be stored in a "zip lock" type plastic bag to limit filtration of air when not in use.

## **III. Procedures for Respirator Use**

- Management will provide proper storage and cleaning supplies to maintain respirators.
- Non-disposable respirators must be cleaned and disinfected daily, or after each individual use.
- Respirators may not be worn when conditions prevent a good face seal (such as a beard or missing dentures).
- Powered Air Purifying Respirators, PAPR's, will be available to employees when a good face seal cannot be achieved.
- Training for the use of PAPR's must be received prior to use.
- To assure proper protection, a user seal check must be performed by the wearer each time a tight fitting respirator is put on.

### **Seal Check Methods:**

- **Positive pressure test:** Close off the exhalation valve with your hand. Breathe air into the mask. The face fit is satisfactory if some pressure can be built up inside the mask without any air leaking out between the mask and the face of the wearer.
- **Negative pressure test:** Close off the inlet openings of the cartridge(s) with the palms of your hands. Some masks may require that the filter holder be removed to seal off the intake valve. Inhale gently so that a vacuum occurs within the face piece. Hold your breath for 10 seconds. If the vacuum remains, and no inward leakage is detected, the respirator is properly fitted.

### **Cartridge Selection & Usage:**

- Respirator cartridges are color coded to assist in determining the proper filter media for the hazard.
- If the color does not match the manufacturer's recommendation for the hazard or none are available, the respirator is not to be worn into the area.
- The Safety and Environmental Compliance department can assist with any questions regarding what cartridges can be worn for specific hazards or work environments.
- Humidity and perspiration will reduce the usage time for some cartridges.
- In the event breathing becomes difficult or a change in taste or smell is suspected, leave the area immediately and change cartridges.

## **IV. Toxic Atmospheres**

In emergency situations where an atmosphere exists in which the wearer of the respirator could be overcome by a toxic material or reduced oxygen atmosphere, the following procedures shall be followed:

1. Never enter a dangerous atmosphere without first obtaining the proper protective equipment and authorization to enter from the Safety and Environmental Compliance department or designee.
2. Never enter a dangerous atmosphere without at least one additional person present. This person must remain in a safe atmosphere at all times.
3. Communications (voice, visual, or signal line) must be maintained between both individuals or all present.
4. The person remaining in the safe atmosphere must have the proper rescue equipment to enable them to aid the person in the dangerous atmosphere if problems encountered. This person must be properly trained with regards to the use and procedures for rescue.
5. Refer to the University's Confined Space Policy for further details.

## **V. Respirator Protection Program Control and Review**

In order to maintain an effective respiratory protection program, proper controls and reviews on how the program is functioning will be necessary. In this manner, improvements can be made and deficiencies eliminated.

### **A. Wearer Acceptance**

- Comfort
- Ability to breathe without objectionable effort.
- Adequate visibility under all conditions.
- Provisions for wearing prescriptions glasses or eye protection.
- Ability to perform all tasks without undue interference.
- Confidence in the face piece fit.