



**Respiratory Protection Program**

**I. Introduction**

The purpose of this program is to ensure that all employees required to wear respiratory protection based on their job duties are protected from airborne hazards through the proper use of respirators. Where feasible, protection shall be accomplished through engineering controls. For example: enclosure, isolation, general or local ventilation and substitution of less toxic materials. The use of appropriate respiratory protection will be required when effective engineering controls and/or administrative controls are not feasible as well as while they are being instituted or evaluated.

**II. Scope**

This program shall apply to all employees required to participate in the respiratory protection program based on potential exposure to airborne hazards during performance of assigned job duties. The program shall not apply to respiratory equipment used for comfort or to prevent exposure to nuisance levels of air contaminants. The respiratory protection program is solely overseen and managed by Environmental Health and Safety.

**III. Responsibilities**

Environmental Health and Safety

- a. Establish and maintain the Respiratory Protection Program and associated records.
- b. Ensure that respirators are selected from those approved by the National Institute for Occupational Safety and Health (NIOSH) and that they have been tested, certified and are suitable for the particular hazard.
- c. Evaluate and recommend respirators for employee use when such equipment is necessary to protect the health of the individual.
- d. Ensure that training and fit testing is provided prior to employee use.
- e. Ensure appropriate surveillance, testing and monitoring of work area conditions to ensure the program is properly implemented and employees are using respirators appropriately.
- f. Conduct an annual evaluation of program effectiveness.
- g. Assist departments with their respiratory protection program needs.

Department/Supervisors

- a. Ensure employees are not assigned tasks requiring the use of respirators unless it has been determined that the employee has received proper medical evaluation, fit testing and training.
- b. Provide, at no cost to employee, a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace.
- c. Provide, at no cost to employee, a respirator that is adequate to protect the health of the employee. Consult EHS for approval of respirator.
- d. Notify Environmental Health and Safety when new employees are hired and assigned duties that require respiratory protection.
- e. Notify Environmental Health and Safety of any defective equipment or any changes in an employee's physical ability to properly use a respirator.

### Employee

- a. Use provided respiratory protection in accordance with the TTU respiratory protection program.
- b. Complete a medical evaluation.
- c. Attend required training and fit testing.
- d. Immediately report any malfunction of the respirator to their supervisor.
- e. Notify their supervisor and EHS when a change in their health status occurs that could affect their ability to use a respirator.

#### **IV. Medical Evaluation**

Each department, as the employer, must provide a medical evaluation to determine an employee's medical eligibility for respirator use. Medical evaluations shall be provided at no expense to the employee. The medical evaluation must occur before an employee is fit tested or required to use the respirator in the workplace. All employees will complete a Medical Evaluation Questionnaire before using a respirator. The questionnaire will be submitted to a physician or health care provider for evaluation. Cleared/not cleared information will be entered with records kept by Environmental Health and Safety. Follow up medical evaluations shall be provided at no expense to the employee when a change in the employee's health is noted.

#### **V. Respirator Selection**

Individual departments are responsible for purchasing and providing respirators to their employees. Prior to purchasing respirators, each department must consult with and receive approval from EHS.

- a. Only NIOSH approved respirators will be used in the respiratory protection program.
- b. The choice of respirators will be dependent upon the following information:
  - i. The airborne contaminant and concentration present.
  - ii. The physical, chemical, and toxicological properties of the contaminants.
  - iii. Odor threshold data (warning properties).
  - iv. Applicable exposure limits.
  - v. Eye irritation potential.
  - vi. Service life information available on cartridges or canisters.
  - vii. Other factors determined by EHS.

#### **VI. Employee Training**

- a. Each employee assigned to an area requiring the use of a respirator will be trained on proper respirator usage by Environmental Health and Safety or designee.
- b. Each employee will be trained on:
  - i. why the respirator is required.
  - ii. Requirements of the OSHA respiratory protection program (medical evaluation, annual fit testing, annual training).
  - iii. limitations of the individual respirator.
  - iv. proper donning, doffing and seal check procedures.
  - v. Inspection, care, maintenance and disposal.
- c. Employees required to wear respirators will be instructed to immediately leave a contaminated area upon suspicion of respirator failure.
- d. A record shall be kept of medical clearance, training and fit testing.

## **VII. Fit Testing of Respirators**

- a. Fit testing shall occur annually.
- b. Additional fit testing may be required whenever an employee reports or the employer observes changes in the employee's physical condition that could affect the respirator fit i.e. facial scarring, dental changes, cosmetic surgery, and obvious changes in body weight, etc.
- c. Fit testing must be conducted using an OSHA accepted protocol.
- d. Employees with facial hair that interferes with the seal of the respirator will be requested to remove the facial hair or decline to be fit tested. Declining fit testing will result in the employee not being able to perform job duties and therefore be subject to disciplinary actions.

## **VIII. Storage, Inspection, Cleaning and Maintenance**

In order to receive the protection for which the program and respirators are designed, it is important to follow all manufacturers instructions for storage, inspection, cleaning and maintenance of respirators as appropriate.

- a. Single Use Respirators (N-95):
  - i. Single use respirators will be available in the area when needed. Such masks must be labeled for the use intended.
  - ii. Masks shall be discarded at the end of each shift or as directed by department leadership, SOP's or based on guidance from authorities having jurisdiction (i.e. OSHA, NIOSH, CDC, Department of Health, etc.)
  - iii. Visibly soiled or contaminated masks will be discarded immediately after use as appropriate based on the contamination.
- b. Re-useable respirators:
  - i. Inspection for defects (including a leak check).
  - ii. All re-usable respirators shall be inspected, cleaned and disinfected monthly as well as before and after each use. Inspection documentation will be maintained by each department. The inspection checklist is packaged with the respirator.
  - iii. Respirator inspection shall include a check of the tightness of connections and the conditions of the face piece, headbands, valves, connecting tube, and cartridges or canisters. Rubber or elastomer parts shall be inspected for pliability and signs of deterioration.
  - iv. Only factory authorized persons shall do replacement or repairs with parts from the manufacturer designed for the respirator.
  - v. After inspection, cleaning, and necessary repair, respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, theft, physical damage or damaging chemicals. Cleaned respirators will be stored in a clean plastic bag and kept in a designated department location. When storing a respirator, the face piece and exhalation valve must be in a normal position to prevent the abnormal set of elastomer parts during storage.

## **IX. Evaluation of Program Effectiveness**

- a. Observation of employee activities throughout the facility will be conducted to confirm proper respirator use is enforced.
- b. The overall effectiveness of the respirator program will be evaluated as necessary by Environmental Health and Safety with actions taken to correct any defects found in the program.

**X. Voluntary Respirator Use**

Under some circumstances, employees may wish to use respiratory protection equipment for their own comfort or sense of well-being, even when there is no recognized hazard or over exposure. In these cases, not all of OSHA's respiratory protection requirements apply. At Tennessee Tech University, the only acceptable respirator for voluntary use is the filtering facepiece respirator. Use of any other types of respirator, for example, a half-face or full-face respirator with cartridges, is not authorized. In order to voluntarily use respiratory protective equipment, the following criteria must be met:

- i. There is no recognized hazard or potential for over exposure.
- ii. The respirator must be NIOSH certified.
- iii. The respirator does not itself present a hazard to the user.
- iv. Filtering facepiece respirators are considered single-use disposable PPE.
- v. They cannot be cleaned and cannot be shared with other employees.
- vi. Employees who would like to voluntarily wear a respirator may purchase and wear their own respirator or may ask their department to supply one for them.
- vii. EHS strongly recommends that voluntary respirator users seek a medical clearance from their personal physician before using a respirator. Medical clearances should be repeated according to the physician's recommendation.
- viii. Employee must complete the Voluntary Use of N-95 Respirators Safety Information packet (Attachment A) and return a completed copy to EHS.

<b>Record</b>	<b>Location</b>	<b>Length of Retention</b>
Medical Evaluation	EHS	Duration of Employment Plus 30 Years.
Respirator Fit Testing	EHS	3 years
Employee Training	EHS	3 years

**References/Standards:**

- 29 CFR 1910.134
- 29 CFR 1910.120
- 29 CFR 1910.132
- 40 CFR 311
- TOSHA CPL-TN 02-00-054

**Attachments:**

- A: Voluntary Use of N-95 Respirators Safety Information

## Attachment A: Voluntary Use of N-95 Respirators Safety Information

Instructions: Review the following information including Appendix D. Initial each box, complete the information and sign the form (both employee/student and supervisor). Maintain a readily retrievable copy of the signed form as well as forward a signed copy to EHS.

### 1. FILTERING FACEPIECE RESPIRATORS AND OSHA REQUIREMENTS

- OSHA considers NIOSH-certified filtering facepiece respirators, such as N-95 (also called dust masks) as true respirators. The letter N means that it is not oil resistant and 95 refers to it being 95% effective at filtering particles at the 0.3 micron level. Other NIOSH-certified filtering facepiece respirators include R-95, P-95, N-100 and P-100.
- OSHA requires that employees voluntarily wearing filtering facepiece respirators receive basic information on respirators as provided in Appendix D of OSHA Respirator Standard, 1910.134.
- Voluntary use of a respirator is defined as use for employee comfort purposes only. This means that no actual hazard exists that requires use of a respirator and the use of the respirator does not produce any additional hazard to the user. At TTU, the only acceptable respirator for voluntary use is the filtering facepiece respirator. Use of any other types of respirator, for example, a half-face or full-face respirator with cartridges, requires full compliance with the TTU Respiratory Protection Program.
- If an employee/student is required to wear a filtering facepiece respirator to protect against a respiratory hazard, as determined by EHS, full compliance with TTU's Respiratory Protection Program is required, which includes a medical evaluation by a licensed health care professional, respirator training and respirator fit testing.

### 2. HOW TO USE AND WEAR A FILTERING FACEPIECE RESPIRATOR

- Inspect the respirator prior to use, including brand new respirators. Check for rips and tears. Make sure straps are securely attached, nose piece is attached properly, and that no obvious defects exist.
- Proper use of the respirator is important. If not used properly, the respirator may be ineffective against airborne contaminants. Always follow manufacturers' instructions for use. Review manufacturer's instructions with the employee/student and have employee/student demonstrate proper use.
- Beards and other facial hair prevent an adequate seal between the respirator and the face, rendering the respirator ineffective. Skin afflictions, such as dermatitis, or scars, could affect the ability to produce a good seal.
- A "seal check" should be performed by the user every time the mask is put on and every time it is re-adjusted on the face. A user seal check confirms that an adequate seal with the face is achieved when the mask is applied. Review manufacturers' instructions for conducting user seal checks with employee/student.

### 3. LIMITATIONS OF PPE

- Filtering facepiece respirators are only useful for protection against particulates (e.g., dust), NOT gases or vapors. Odors will still be noted when using the respirator. Respirators are not to

be used in oxygen-deficient atmospheres or atmospheres that contain hazards that are Immediately Dangerous to Life and Health (IDLH).

4. CARE, MAINTENANCE, USEFUL LIFE AND DISPOSAL OF PPE

Filtering facepiece respirators are considered disposable PPE and can be disposed of in regular trash after use, unless otherwise directed. They cannot be cleaned, especially when they become wet or soiled. They must not be shared.

Respirators should be stored in a clean, dry location, protected from sunlight, chemicals, water, and physical damage.

**Appendix D to OSHA Standard Section 1910.134 (Mandatory)  
Information for Employees/Students Using Respirators When Not Required Under the Standard**

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard. You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Certification: I have reviewed this document and take full responsibility to follow the directions. If there is any change in my work conditions or health I will immediately notify my supervisor and EHS. A completed copy of this document must be maintained by the supervisor and EHS.

Employee's Name: \_\_\_\_\_

Dept.: \_\_\_\_\_ T-number: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_ Phone: \_\_\_\_\_

Supervisor's Name: \_\_\_\_\_

Dept.: \_\_\_\_\_ T-number: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_ Phone: \_\_\_\_\_