



UNIVERSITY OF  
**TEXAS**  
ARLINGTON

ENVIRONMENTAL  
HEALTH & SAFETY

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# Respiratory Protection Program



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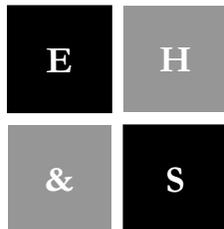
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THE UNIVERSITY OF TEXAS AT ARLINGTON

# Respiratory Protection Program

## 29 CFR 1910.134

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## TABLE OF CONTENTS

<b>I.</b>	<b>Purpose</b>	<b>1</b>
<b>II.</b>	<b>Scope and Application</b>	<b>1</b>
<b>III.</b>	<b>Responsibilities</b>	<b>1</b>
	A. Program Administrator	1
	B. Supervisors	2
	C. Employees/students	2
<b>IV.</b>	<b>Program Elements</b>	
	A. Selection Procedures	3
	B. Updating the Hazard Assessment	3
	C. NIOSH Certification	3
	D. Voluntary Respirator Use	3
	E. Medical Evaluation	4
	F. Fit Testing	5
	G. General Use Procedures	6
	H. Respirator Malfunction	6
	I. IDLH Procedures	6
	J. Cleaning	7
	K. Maintenance and Inspection	7
	L. Change Schedules	9
	M. Storage	9
	N. Defective Respirators	9
	O. Training	10
<b>V.</b>	<b>Program Evaluation</b>	<b>10</b>
<b>VI.</b>	<b>Documentation and Recordkeeping</b>	<b>11</b>
<b>Appendixes</b>		
	Appendix A- Qualitative Fit Test Record	
	Appendix B- Respirator Training Record	
	Appendix C- Respiratory Protection Standard	
	Appendix D- Voluntary Use of Respirators	

## **I. Purpose**

This document provides information and guidance necessary to ensure that the respiratory protection program at the University of Texas at Arlington (UTA) is consistent with the Occupational Safety and Health Administration (OSHA) standards. This document outlines the minimum acceptable requirements for a respiratory protection program, delineates responsibilities, provides selection criteria in determining respiratory protection needs. This document implements the provisions of Title 29, Code of Federal Regulations (CFR), Section 1910.134, Respiratory Protection.

Engineering/Administrative controls, such as ventilation and substitution of less toxic materials, are the first line of defense at UTA; however, engineering controls have not always been feasible for some of our operations or have not always completely controlled the identified hazards. In these situations, respirators and other protective equipment must be used. Respirators are also needed to protect employees/students' health during emergencies.

## **II. Scope and Application**

This program applies to all employees/students who are required to wear respirators during normal work operations, and during some non-routine or emergency operations such as a spill of a hazardous substance.

An employee/student who voluntarily wears a tight-fitting elastomeric respirator when a respirator is not required is subject to the training, medical evaluation, fit testing, cleaning, maintenance, and storage elements of this program, and must be provided with certain information specified in this section of the program.

An employee/student who voluntarily wears a filtering face piece (N95, etc.) is subject to the training but not to the medical evaluation, fit testing, cleaning, storage, and maintenance provisions of this program.

Employees/students participating in the respiratory protection program do so at no cost to themselves. The expense associated with training, medical evaluations and respiratory protection equipment will be covered by the respective Principal Investigator (PI) or the employee/student's department.

Air Supply Systems are not provided to employees/students of UTA.

### **III. Responsibilities**

#### **A. Program Administrator**

The Program Administrator is responsible for administering the respiratory protection program. Duties of the Program Administrator include:

- Identifying work areas, processes or tasks that require workers to wear respirators, and evaluating hazards.
- Selecting respiratory protection options.
- Monitoring respirator use to ensure that respirators are used in accordance with their certifications.
- Scheduling and/or conducting training.
- Ensuring proper storage and maintenance of respiratory protection equipment.
- Conducting fit testing.
- Evaluating medical evaluation.
- Maintaining records required by the program.
- Evaluating the program.
- Updating the written program, as needed.

UTA's Program Administrator will be an Environmental Health and Safety (EH&S) staff member.

#### **B. Supervisors**

Supervisors are responsible for ensuring that the Respiratory Protection Program is implemented in their areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees/students under their charge. Duties of the supervisor include:

- Being aware of tasks requiring the use of respiratory protection.
- Ensuring that employees/students under their supervision (including new hires) have received appropriate training, medical evaluation, and fit testing.
- Ensuring the availability of appropriate respirators and accessories.
- Enforcing the proper use of respiratory protection when necessary.
- Ensuring that respirators are properly cleaned, maintained, and stored.
- Ensuring that respirators fit well and do not cause discomfort.

- Continually monitoring work areas and operations to identify respiratory hazards.
- Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

### **C. Employees/students**

Each employee/student has the responsibility to wear the respirator when and where required and in the manner in which they were trained. Employees/students must also:

- Care for and maintain their respirators as instructed, and store them in a clean sanitary location.
- Inform their supervisor if the respirator no longer fits well, and request a new one that fits properly.
- Inform their supervisor or the Program Administrator of any respiratory hazards that they feel is not adequately addressed in the workplace and of any other concerns that they have regarding the program.

## **IV. Program Elements**

### **A. Selection Procedures**

The Program Administrator will assist departments in selecting respirators based on the hazards to which workers are exposed and in accordance with all Occupational Health and Safety standards. The Program Administrator will assist departments in conducting a hazard evaluation for each operation, process, or work area where airborne contaminants may be present in routine operations or during an emergency. The hazard evaluation will include:

1. Identification and development of a list of hazardous substances used in the workplace, by department, or work process.
2. Review of work processes to determine where potential exposures to these hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing process records, and talking with employees/students and supervisors.
3. Exposure monitoring to quantify potential hazardous exposures.

### **B. Updating the Hazard Assessment**

The department, with the help of the Program Administrator, must revise and update the hazard assessment as needed (i.e., any time work processes change may potentially affect exposure). If an employee/student feels that respiratory protection is needed during a particular activity, he/she is to contact his or her supervisor or the Program Administrator. The department, with the assistance of the Program Administrator, will evaluate the potential hazard. The department will then communicate the results of that assessment back to the employee/student. If it is determined that respiratory protection is necessary, all other elements of this program will be in effect for those tasks.

### **C. NIOSH Certification**

All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. In addition, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while any of the above is in use.

### **D. Voluntary Respirator Use**

The UTA respective PI or their department may provide respirators at no charge to employees/students for voluntary use during certain procedures. As a general policy, the University will review each of these requests on a case-by-case basis. The voluntary use of respiratory protection may be approved if it will not jeopardize the health or safety of the worker(s).

The Program Administrator shall provide all employees/students who voluntarily choose to wear respirators (filtering face pieces) with a copy of Appendixes C and D of the standard. (Appendix D details the requirements for voluntary use of respirators by employees/students). Employees/students who voluntarily choose to wear a tight-fitting elastomeric half- or full-face piece Air-Purifying Respirator (APR) must comply with the procedures for Medical Evaluation, Fit Testing, Respirator Use, Cleaning, Maintenance and Storage.

The Program Administrator will authorize voluntary use of respiratory protective equipment based on specific workplace conditions and the results of a medical evaluation.

### **E. Medical Evaluation**

1. Employees/students who are either required to wear respirators, or who choose to wear an elastomeric APR voluntarily, must pass a medical exam before being permitted to wear a respirator on the job. Employees/students are not permitted to wear respirators until a physician or other licensed health care professional (PLHCP) has determined that they are medically able to do so. Any employee/student refusing the medical evaluation will not be allowed to work in an area requiring respirator use.
2. A PLHCP designated by the University will provide the medical evaluation. Medical evaluation procedures are as follows:
  - The medical evaluation will be conducted using the OSHA questionnaire given to the affected employee/student.
  - Follow-up medical exams will be granted to employee/student as required by the standard, and/or as deemed necessary by the PLHCP.
  - All employees/students will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.
  - The Program Administrator will provide the PLHCP (if requested) with the following at their request:
    - a copy of this program.

- a copy of the Respiratory Protection Standard.
- a list of hazardous substances to which the employee/student may be exposed.

Also, for each employee/student requiring evaluation: his or her work area or job title, proposed respirator type and weight, length of time required to wear respirator, expected physical workload (light, moderate, or heavy), potential temperature and humidity extremes, and any additional protective clothing required.

- Any employee/student required for medical reasons to wear a positive pressure air-purifying respirator would be provided with a powered air-purifying respirator (PAPR) if the task is required to be completed by the employee/student.
  - After an employee/student has received clearance and begins to wear his or her respirator, additional medical evaluations will be provided under the following circumstances:
    - Employee/student reports signs and/or symptoms related to their ability to use a respirator, such as shortness of breath, dizziness, chest pains, or wheezing.
    - The supervisor informs the Program Administrator that the employee/student needs to be reevaluated.
    - Information from this program, including observations made during fit testing and program evaluation, indicates a need for reevaluation.
    - A change occurs in workplace conditions that may result in an increased physiological burden on the employee/student.
3. All examinations and questionnaires are to remain confidential between the employee/student and the PLHCP.

## **F. Fit Testing**

1. Fit testing is required for employees/students wearing tight-fitting respirators.
2. Employees/students who are required to wear tight-fitting face piece respirators will be fit tested:
  - Prior to initial use.
  - Annually.
  - When there are changes in the employee/student's physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, etc.).
  - Whenever an employee/student switches to a different respirator.
3. Employees/students will be fit tested with the make, model, and size of respirator that they will wear. Employees/students will be provided with a sufficient number of respirator models and sizes so that they may find an optimal fit.

4. The Program Administrator will conduct fit tests following the OSHA approved Qualitative Fit Test (QLFT) or Quantitative Fit Test (QNFT) Protocols in 29 CFR 1910.134, Appendix A of the Respiratory Protection Standard.

*Note: If conditions affecting respirator use change, the Program Administrator will evaluate on a case-by-case basis whether Quantitative Fit Test (QNFT) is required.*

### **G. General Use Procedures**

1. Employees/students will use their respirators under conditions specified by this program, and in accordance with the training they receive on the use of each particular model. In addition, a respirator shall not be used in a manner that is not certified by NIOSH or by the manufacturer.
2. All employees/students shall conduct user seal checks before they wear their respirator. Employees/students shall use either the positive or negative pressure check (depending on which test works best for them) specified in Appendix B-1 of the Respiratory Protection Standard.
3. All employees/students shall be permitted to leave the work area to maintain their respirator. Such activities may include cleaning their respirator if the respirator is impeding their ability to work, changing filters or cartridges, replacing parts, or inspecting the respirator if it stops functioning as intended. Employees/students should notify their supervisor before leaving the area.
4. Employees/students are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures, that prevents them from achieving a good seal. Employees/students are not permitted to wear headphones, jewelry, or other articles that may interfere with the facepiece-to-face seal.

### **H. Respirator Malfunction**

For any malfunction of the respirator (e.g., such as breakthrough, facepiece leakage, or improperly working valve), the respirator wearer should inform his or her supervisor that the respirator no longer functions as intended and go to the designated safe area to replace/maintain the respirator. The supervisor must ensure that the employee/student receives the needed parts to repair the respirator or is provided with a new respirator.

### **I. IDLH Procedures**

The following procedures shall be followed in any area with a potential for Immediately Dangerous to Life and Health (IDLH) conditions, e.g., a Permit Required Confined Space, Oxygen deficient atmosphere, or large hazardous chemical spill.

UTA employees/students do not have the equipment or training to enter or work in IDLH conditions, which requires a pressure demand Supplied-Air Respirator (SAR). In the event of an emergency involving potential IDLH environment, the person must leave the area, and immediately notify EH&S at 817-272-2185 during business hours 8am-5pm and Police Department at 817-272-3003 after 5 pm.

## **J. Cleaning**

1. Respirators are to be regularly cleaned and disinfected.
2. Respirators issued for the exclusive use of an employee/student shall be cleaned as often as necessary.
3. The following procedure is to be used when cleaning and disinfecting respirators:
  - Disassemble respirator, removing any filters, canisters, or cartridges.
  - Wash the facepiece and associated parts in a mild detergent with warm water. Do not use organic solvents.
  - Rinse completely in clean warm water.
  - Wipe the respirator with disinfectant wipes (70% Isopropyl Alcohol) to kill germs.
  - Air-dry in a clean area.
  - Reassemble the respirator and replace any defective parts.
  - Place in a clean, dry plastic bag or other airtight container.

*Note: Departments will ensure an adequate supply of appropriate cleaning and disinfecting materials at the cleaning station. If supplies are low, employees/students should contact their supervisor.*

## **K. Maintenance and Inspection**

1. Each employee/student issued a respirator shall inspect the respirator prior to each use to ensure that it is in good condition.
2. Respirators are to be properly maintained at all times in order to ensure that they function properly and adequately protect the employee/student. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts will be replaced prior to use. No components will be replaced, or repairs made beyond those recommended by the manufacturer.
3. The following checklist shall be used when inspecting respirators:

Facepiece:

  - Cracks, tears, or holes.
  - Facemask distortion.

- Cracked or loose lenses/face shield.

Head straps:

- Breaks or tears.
- Broken buckles.
- Rigid or worn.

Valves:

- Residue or dirt.
- Cracks or tears in valve material.

Filters/Cartridges:

- Appropriate filter/cartridge type.
- Gaskets.
- Cracks or dents in housing.

4. Employees/students are permitted to leave their work area to perform limited maintenance on their respirator in a designated area that is free of respiratory hazards. Employees/students may be permitted to wash their face and respirator facepiece to prevent any eye or skin irritation. In addition, they may replace the filter, cartridge or canister, etc., if they detect vapor or gas breakthrough or leakage in the facepiece or if they detect any other damage to the respirator or its components.

## **L. Change Schedules**

1. Employees/students wearing APRs or PAPRs with HEPA filters for protection against particulates shall change the cartridges on their respirators based on the manufacturer's recommendations.
2. When an APR is selected for protection against gases and vapors, UTA Department will use an established and enforced cartridge/canister change-out schedule that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.
3. Reliance on odor thresholds and other warning properties will not be permitted as the primary basis for determining the service life of gas and vapor cartridges and canisters.
4. OSHA emphasizes that a conservative approach is recommended when evaluating service life testing data. Temperature, humidity, air flow through the filter, the work rate, and the presence of other potential interfering chemicals in the workplace, all can have a serious effect on the service life of an air-purifying cartridge or canister.

## **M. Storage**

1. Respirators must be stored so that they are protected against damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and/or in accordance with the manufacturer's recommendations.

2. The respirator must be stored in a manner that will prevent deformation. Each respirator should be positioned so that it retains its natural configuration.
3. Each employee/student will clean and inspect their own air-purifying respirator in accordance with the provisions of this program and will store their respirator in a plastic bag. Each employee/student will have his/her name on the bag and that bag will only be used to store that employee/student's respirator.
4. Departments will store their supply of respirators and respirator components in their original manufacturer's packaging.
5. Respirators intended for emergency use must be kept accessible to the work area, but not in an area that might itself be involved in the emergency because such an area may become contaminated or inaccessible.

#### **N. Defective Respirators**

Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee/student discovers a defect in a respirator, he/she is to bring the defect to the attention of his or her supervisor. Supervisors, with the assistance of the Program Administrator, will decide whether to:

- Temporarily take the respirator out of service until it can be repaired.
- Perform a simple fix on the spot such as replacing a head strap.
- Dispose of the respirator due to an irreparable problem or defect.

#### **O. Training**

1. The Program Administrator will provide training to respirator users on the contents of UTA Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection standard. Employees/students will be trained prior to using a respirator in the workplace.
2. The training course will cover the following topics (See **Respirator Training Record**):
  - UTA Respiratory Protection Program.
  - The OSHA Respiratory Protection Standard.
  - Proper selection and use of respirators.
  - Limitations of respirators.
  - Respirator donning and user seal (fit) checks, including demonstration and practice.
  - Fit testing.
  - Change-out schedules.
  - Maintenance and storage.
  - Medical signs and symptoms limiting the effective use of respirators.
3. Employees/students will be retrained annually or as needed (e.g., if they change departments and need to use a different respirator). Employees/students must

demonstrate their understanding of the topics covered in the training through hands-on exercises and a written test. The Program Administrator will document respirator training and the documentation will include the type, model, and size of respirator for which each employee/student has been trained and fit tested.

## **V. Program Evaluation**

The Program Administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. The evaluations will include regular consultations with employees/students who use respirators and their supervisors, site inspections, air monitoring and a review of records.

The Program Administrator shall conduct an annual evaluation of the Respiratory Protection Program.

## **VI. Documentation and Recordkeeping**

The Respiratory Protection Program shall be made available to all employees/students who wish to review it.

The Program Administrator will also maintain copies of training and fit test records. These records will be updated as new employees/students are trained, as existing employees/students receive refresher training, and as new fit tests are conducted.

The completed medical questionnaire and the physician's documented findings are confidential and will remain with the PLHCP. The University will only retain the physician's written recommendation regarding each employee/student's ability to wear a respirator.

# Appendixes



**Appendix A**  
**Qualitative Fit Test Record**

Name: \_\_\_\_\_

Department: \_\_\_\_\_ Supervisor: \_\_\_\_\_

ID No.: \_\_\_\_\_ Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Type/Brand of Respirator \_\_\_\_\_

Model: \_\_\_\_\_

Size: \_\_\_\_\_

Test Agent \_\_\_\_\_

Results (circle): Pass Fail

Name of Test Conductor: \_\_\_\_\_

Duties Requiring Respirator: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Appendix B

### Respirator Training Record

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
DEPARTMENT: \_\_\_\_\_ SUPERVISOR: \_\_\_\_\_

This will confirm that, I (undersigned) have received training in the proper selection, use and care of the respirator assigned to me.

The contents of the training I received were:  
(check items covered)

- \_\_\_\_\_ Description of Respiratory Protection Program
- \_\_\_\_\_ Responsibilities
- \_\_\_\_\_ Respirator Selection Principles
- \_\_\_\_\_ No Facial Hair Allowed (that can interfere with seal)
- \_\_\_\_\_ Hazards of Expected Contaminants
- \_\_\_\_\_ Medical Monitoring Principles
- \_\_\_\_\_ Emergency Procedures
- \_\_\_\_\_ Respirator Donning and Use
- \_\_\_\_\_ Respirator Care and Storage
- \_\_\_\_\_ Cartridge/Filter Change-out Schedule

Further, I understand the importance of this program and agree to abide by its contents.

Trainee: \_\_\_\_\_

Instructor: \_\_\_\_\_

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## Appendix C

### Respiratory Protection Standard

For a copy of the Respiratory Protection Standard, 29 CFR 1910.134, visit the following links to the Occupational Safety and Health Administration's web site.

Respiratory Protection Standard

[Respiratory Protection. - 1910.134](#)

Information for Employee/students Using  
Respirators when not required  
Under Standard

[\(Mandatory\) Information for  
Employee/students Using Respirators  
When not Required Under Standard. -  
1910.134 App D](#)



## Appendix D

### Appendix D: Voluntary Use of Respirators, Mandatory Employee/student Information

Respirators are an effective method of protection against designated hazards when properly selected and worn. 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, 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 follow 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

(Taken from Appendix D to 29 CFR 1910.134, OSHA Respiratory Protection)

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### Voluntary Use Agreement Form

Employee/student Name: \_\_\_\_\_  
(last) (first)

Department: \_\_\_\_\_

Employee/student ID#: \_\_\_\_\_

I have read and understood the information provided above regarding voluntary respirator use.

\_\_\_\_\_

Employee/student Signature Date

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