Respiratory Protection Program
Respiratory Protection Program
29 CFR 1910.134

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Revised: April 2013
# TABLE OF CONTENTS

I. Purpose  
II. Scope and Application  
III. Responsibilities  
   A. Program Administrator  
   B. Supervisors  
   C. Employees  
IV. Program Elements  
   A. Selection Procedures  
   B. Updating the Hazard Assessment  
   C. NIOSH Certification  
   D. Voluntary Respirator Use  
   E. Medical Evaluation  
   F. Fit Testing  
   G. General Use Procedures  
   H. Respirator Malfunction  
   I. IDLH Procedures  
   J. Air Quality  
   K. Cleaning  
   L. Maintenance and Inspection  
   M. Change Schedules  
   N. Storage  
   O. Defective Respirators  
   P. Training  
V. Program Evaluation  
VI. Documentation and Recordkeeping  

Appendices  
   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 (UT Arlington) is consistent with the Occupational Safety and Health Administration (OSHA) standards. This document outlines the minimal acceptable requirements for a respiratory protection program, delineates responsibilities, provides selection criteria in determining respiratory protection needs, and lists currently approved respiratory protective devices used at UT Arlington. This document implements the provisions of Title 29, Code of Federal Regulations (CFR), Section 1910.134, Respiratory Protection.

Engineering controls, such as ventilation and substitution of less toxic materials, are the first line of defense at UT Arlington; 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' health during emergencies.

II. Scope and Application

This program applies to all employees 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 who voluntarily wears a respirator when a respirator is not required is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and must be provided with certain information specified in this section of the program. Employees who voluntarily wear filtering face pieces (N95, etc.) are not subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.

Employees 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 borne by the respective Principal Investigator (PI) or the employee’s department.

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.

UT Arlington’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 particular 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 under their charge. Duties of the supervisor include:

• Ensuring that employees under their supervision (including new hires) have received appropriate training, fit testing and medical evaluation.
• Ensuring the availability of appropriate respirators and accessories.
• Being aware of tasks requiring the use of respiratory protection.
• Enforcing the proper use of respiratory protection when necessary.
• Ensuring that respirators are properly cleaned, maintained, and stored according to the respiratory protection plan.
• 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

Each employee has the responsibility to wear the respirator when and where required and in the manner in which they were trained. Employees 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 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 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. If it is determined that respiratory protection is necessary, all other elements of this program will be in effect for those tasks, and this program will be updated accordingly.

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 UT Arlington respective PI or their department will provide respirators at no charge to employees 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). As outlined in the Scope and Application section of this program, voluntary respirator use is subject to certain requirements of this program.

The Program Administrator shall provide all employees who voluntarily choose to wear respirators (filtering face pieces) with a copy of Appendix C of the standard. (Appendix C details the requirements for voluntary use of respirators by employees.) Employees choosing to wear a half face piece Air-Purifying Respirator (APR) must comply with the procedures for Medical Evaluation, 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, if required.

E. Medical Evaluation

1. Employees who are either required to wear respirators, or who choose to wear an APR voluntarily, must pass a medical exam before being permitted to wear a respirator on the job. Employees 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 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 evaluations. Medical evaluation procedures are as follows:
   - The medical evaluation will be conducted using the OSHA questionnaire given to the affected employee.
   - Follow-up medical exams will be granted to employees as required by the standard, and/or as deemed necessary by the PLHCP.
   - All employees 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 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 may be exposed
   Also, for each employee requiring evaluation: his or her work area or job title, proposed respirator type and weight, length of time required to wear respirator, expected physical work load (light, moderate, or heavy), potential temperature and humidity extremes, and any additional protective clothing required.

   - Any employee required for medical reasons to wear a positive pressure air-purifying respirator would be provided with a powered air-purifying respirator (PAPR).
   - After an employee has received clearance and begins to wear his or her respirator, additional medical evaluations will be provided under the following circumstances:
• Employee 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 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.

3. All examinations and questionnaires are to remain confidential between the employee and the PLHCP.

F. Fit Testing

1. Fit testing is required for employees wearing tight-fitting respirators. Employees voluntarily wearing half-face piece APRs may also be fit tested upon request.

2. Employees 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’s physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, etc.).
   • Whenever an employee switches to a different respirator.

3. Employees will be fit tested with the make, model, and size of respirator that they will actually wear (See Qualitative Fit Test Record). Employees will be provided with a sufficient number of respirator models and sizes so that they may find an optimal fit. Fit testing of PAPRs is to be conducted in the negative pressure mode.

4. The Program Administrator will conduct fit tests following the OSHA approved Qualitative Fit Test (QLFT) Protocol in 29 CFR 1910.134, Appendix A (B1-5) 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 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 shall conduct user seal checks each time that they wear their respirator. Employees 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 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 should notify their supervisor before leaving the area.

4. Employees 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 are not permitted to wear headphones, jewelry, or other articles that may interfere with the facepiece-to-face seal.

H. Respirator Malfunction

1. For any malfunction of an APR (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 receives the needed parts to repair the respirator, or is provided with a new respirator.

2. All workers wearing atmosphere-supplying respirators will work pairs using the “buddy system”.

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 or large hazardous chemical spill.

1. Workers entering this area shall wear a pressure demand Supplied-Air Respirator (SAR).

2. An appropriately trained and equipped standby employee or, when needed, more than one employee, shall remain outside the IDLH atmosphere and maintain constant voice and visual communication with the employee.

3. In the event of an emergency requiring the standby person to enter the IDLH environment, the standby person shall immediately notify EH&S and/or a supervisor prior to providing necessary assistance appropriate to the situation.
4. For a Permit Required Confined Space, employees shall also comply with all relevant entry procedures as mandated by Federal and State regulations and University policies and procedures.

J. Air Quality

1. Any department using SARs shall maintain a minimum air supply of one fully charged replacement cylinder for each SAR unit.

2. For SARs, only Grade D breathing air shall be used in the cylinders. The vendor is required to certify that the air in the cylinders meets the specifications of Grade D breathing air.

3. Compressed oxygen shall not be used in atmosphere-supplying respirators, including open circuit Self-Contained Breathing Apparatus (SCBA) that has previously used compressed air. This is to prevent possible fires and explosions.

K. Cleaning

1. Respirators are to be regularly cleaned and disinfected.

2. Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary.

3. Atmosphere supplying respirators are to be cleaned and disinfected after each use.

4. 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 should contact their supervisor.

L. Maintenance and Inspection

1. Each employee 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. 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. The manufacturer will conduct repairs to regulators or alarms of atmosphere-supplying respirators.

3. The following checklist shall be used when inspecting respirators:

   Facepiece:
   - Cracks, tears, or holes
   - Facemask distortion
   - Cracked or loose lenses/faceshield

   Head straps:
   - Breaks or tears
   - Broken buckles
   - Rigid or worn

   Valves:
   - Residue or dirt
   - Cracks or tears in valve material

   Filters/Cartridges:
   - Approval designation
   - Gaskets
   - Cracks or dents in housing
   - Proper cartridge for hazard

   Air Supply Systems:
   - Breathing air quality/grade
   - Condition of supply hoses
   - Hose connections
   - Settings on regulators and valves

4. Employees 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 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.
M. Change Schedules

1. Employees wearing APRs or PAPRs with HEPA filters for protection against particulates shall change the cartridges on their respirators based on the manufacturer’s recommendations, or when they first begin to experience difficulty breathing (i.e., resistance) while wearing their masks.

2. When an APR is selected for protection against gases and vapors, a system must be in effect that will reliably warn respirator wearers of contaminant breakthrough. UT Arlington will use the following systems:
   - Respirators equipped with an end of life indicator certified by NIOSH for the contaminant, or
   - 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.

N. 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 facepiece and exhalation valve 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 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 will have his/her name on the bag and that bag will only be used to store that employee'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.

O. Defective Respirators

1. Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee 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.

2. When a respirator is taken out of service for an extended period of time, the respirator will be tagged out of service, and the employee will be given a replacement of similar
make, model, and size. All tagged out respirators will be kept in a storage cabinet inside the Program Administrator’s office.

P. Training

1. The Program Administrator will provide training to respirator users and their supervisors on the contents of UT Arlington’s Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection standard. Workers will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to using a respirator in the workplace or prior to supervising employees who must wear respirators.

2. The training course will cover the following topics (See Respirator Training Record):
   - UT Arlington Respiratory Protection Program
   - The OSHA Respiratory Protection Standard
   - Respiratory hazards encountered at UT Arlington and their health effects
   - 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 will be retrained annually or as needed (e.g., if they change departments and need to use a different respirator). Employees 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 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 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 written program.
VI. Documentation and Recordkeeping

A written copy of this program and the OSHA standard is kept in the Program Administrator's office and at each affected department. This information shall be made available to all employees 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 are trained, as existing employees 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'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: _____________________________________________________________________

Approval Number: ________________________________________________________

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: ___________________________________________________________________

________________________________________________________
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

Information for Employees Using Respirators when not required Under Standard

Respiratory Protection. - 1910.134

(Mandatory) Information for Employees Using Respirators When not Required Under Standard. - 1910.134 App D
Appendix D

Appendix D: Voluntary Use of Respirators, Mandatory Employee 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 respirators 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)

Voluntary Use Agreement Form

Employee Name: ____________________________ ____________________________ 
(last) (first)

Department: ____________________________

Employee ID#: ____________________________

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

__________________________________________

Employee Signature Date