

# Environmental Health and Safety The University of Texas at El Paso



## Respiratory Protection Program

## **I. Foreword**

The University of Texas at El Paso (UTEP) has a fundamental commitment and responsibility to protect the health and safety of its faculty, students, employees, and the visiting public when participating in official activities. Many occupational diseases can be effectively prevented by minimizing or eliminating the breathing of air that may be contaminated with harmful dusts, fogs, fumes, mist, gases, smokes, sprays, or vapors. This shall be accomplished as far as feasible by accepted engineering control measures such as enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials. When effective engineering controls are not feasible, or while they are being instituted, it is the aim of this program to ensure that respiratory protection is provided, utilized, and maintained in an appropriate and safe manner.

## **II. Purpose**

The purpose of this program is to ensure the protection of all UTEP personnel from respiratory hazards through the proper use of approved respirators. Job-specific respirators shall be recommended by the Department of Environmental Health and Safety (EH&S) and are to be used when engineering controls for respiratory hazards are not feasible or ineffective, while engineering controls are being installed or repaired, and for emergency or other temporary situations.

Voluntary respirator use (when exposures are below the permissible exposure limit) is permitted at the request of the employee or student and upon review by Environmental Health and Safety and subsequent to a medical evaluation and fit test. The procedures set forth in this program comply fully with the requirements of the Occupational Safety and Health Administration's (OSHA) 29 CFR 1910.134. Procedures apply to all UTEP faculty, students, and staff. Non-UTEP personnel working at UTEP must observe procedures that are equivalent to or exceed the requirements of the UTEP respiratory protection program.

## **III. Responsibilities**

### **A. Environmental Health and Safety (EH&S) will:**

- Manage the Respiratory Protection Program. The Vice President of Environmental Health and Safety will serve as the Respiratory Protection Program administrator.
- Provide Respiratory Protection training.
- Conduct fit testing.
- Maintain documentation of training and fit testing
- Recommend appropriate respirators and cartridges.
- Conduct periodic monitoring to assess concentrations of airborne contaminants.
- Conduct periodic inspections of respirator storage and use and ensure that these inspections are properly documented.

**B. A Physician or other Licensed Health Care Professional (PLHCP) will:**

- Perform and document initial and subsequent medical surveillance of all respirator wearers at no cost to the student and employee.

**C. Employee Supervisor/ Principal Investigator will:**

- Identify personnel who may need to utilize respiratory protection.
- Purchase appropriate respirators, cartridges, and approved replacement parts at no cost to student/employee.
- Ensure that employees/students have had medical surveillance as required by this program.
- Ensure that employees/students are properly trained before utilizing respiratory protection, and that employees/students receive any required refresher training (at least annually)
- Contact EH&S to perform any initial or follow-up monitoring.
- Report any problems with respiratory protection to EH&S
- Ensure that employees/students are up to date for fit testing (annual requirement)
- Ensure that employees/students who are required to wear a respirator because of potential exposure, do so, as a condition of employment

**D. Respirator User will:**

- Complete the Occupational Health Questionnaire (annually)
- Complete the Respiratory Protection Questionnaire for first evaluation and again if needed.
- Schedule Medical Surveillance visit with the PLHCP when instructed by EH&S
- Comply with all requirements of PLCHP as part of medical surveillance.
- Schedule annual fit testing with EH&S
- Attend Respiratory Protection training (annually)
- Clean and inspect respirator before and after each use.
- Store respirator in a resealable plastic bag in a clean area away from possible contaminants
- Use respirator in accordance with manufacturer's recommendations.
- Properly wear respirator and all related equipment as trained
- Report any problems with respiratory protection to the department supervisor and EH&S

**IV. Determination of Need for Respiratory Protection**

It is each supervisor's/principal investigator's responsibility to ensure that EH&S is notified of all practices that may present the need for students or employees to wear respiratory protection. Respiratory protection use is required when engineering controls for achieving respiratory protection is neither technologically nor economically feasible, for tasks such as, but not limited to:

- A. Those that liberate harmful dust, mist, fumes, vapors, or gases.

B. Those that occur in areas in which unacceptable levels of exposure could result from the processing, handling, storing, or disposing of hazardous substances.

C. Those that require entry into oxygen-deficient or potentially oxygen-deficient environments

Exposure determinations will be conducted by EH&S to confirm or justify the need for, or continued use of, respiratory protection. EH&S must also be notified when engineering or procedural changes occur, which could affect employee or student exposures, or when new hazards are introduced into the workplace, to allow for subsequent exposure determinations to be initiated.

## **V. Medical Surveillance**

Employees and/or students will not be assigned to tasks requiring the use of respirators unless it has been determined that their health and physical condition will enable them to do so safely. The PLHCP will determine this at no cost to the employee or student before fit testing or use of a respirator. It is possible, if requested, that an employee or student may use his or her personal health care practitioner to provide a medical evaluation. In this case, however, the employer is required to contact the PLHCP and provide him/her with a copy of the respiratory protection standard and other required supplemental information, such as any workplace variables that may increase pulmonary and cardiovascular stress during respirator use. The PLHCP will conduct a medical evaluation. The PLHCP will be asked to sign a respirator user's approval document stating that the user is physically able to work while wearing a respirator (Appendix B). The respirator user's medical status will be reviewed periodically as determined by the health care practitioner in his/her written medical opinion.

## **VI. Types of Respirators**

There are two primary types of respiratory protective equipment one may utilize when appropriate engineering controls are not feasible. These types of respirators are referred to as air-purifying respirators and atmosphere supplying respirators. The following is a description of air purifying and atmosphere supplying respirators and their limitations for use:

### **A. Air Purifying Respirators:**

Air-purifying respirators remove particulate, vapor, and gas contaminants from the air we breathe prior to inhalation. Some common examples of these contaminants include welding fumes, asbestos fibers, solvent vapors, and pesticide mists. Contaminants of this type are removed by a cartridge or canister, which is fixed to the respirator face piece. The cartridges and canisters remove contaminants by various filtering and absorption mechanisms.

Air-purifying respirators may be powered or non-powered units. The use of a non-powered air-purifying respirator may result in additional physical stress due to an increased difficulty in breathing. A powered air-purifying respirator is equipped with a blower, which passes ambient air through the air-purification unit and supplies the purified air to the respirator face piece.

***Limitations:***

Air-purifying respirators must not be used in oxygen-deficient atmospheres (<19.5%) or in atmospheres that are Immediately Dangerous to Life and Health (IDLH). Examples of work place situations that may be oxygen-deficient or IDLH include confined spaces and work areas that have high air-borne concentrations of toxic chemicals. Work environments such as this will require a higher level of protection (see Atmosphere-Supplying Respirators).

The Maximum Use Concentration (MUC) may be determined with a simple calculation if the concentration of the air-borne contaminant is known. The MUC is calculated by determining the OSHA Permissible Exposure Limit (PEL) for a specific hazard and multiplying it by the Assigned Protection Factor (APF) for the respirator. The assigned protection factor is the level of protection a respirator provides if worn properly; the greater the number, the greater the protection (See Tables 1 and 2). In order to ensure that the appropriate cartridge or canister is being used with your respirator, EH&S will recommend one specific to the particular hazards of your job.

**B. Atmosphere-Supplying Respirators:**

Atmosphere-Supplying respirators provide the user with breathable air independent of the ambient air. These types of respirators may be used to provide protection in oxygen-deficient atmospheres and in highly toxic atmospheres. There are several different types of atmosphere-supplying respirators that offer a superior degree of protection against atmospheric contaminants and require specialized training for use:

***Self-Contained Breathing Apparatus:***

The self-contained breathing apparatus (SCBA) is a unit that allows the user to carry their breathing atmosphere with them. SCBA's are normally used when there is a short-term need to enter and escape from atmospheres that are or may be immediately dangerous to life and health (IDLH). The most important limitation associated with using the SCBA is the oxygen capacity of the device. Most SCBA's only have a 15–30-minute oxygen supply, which may be rapidly depleted if the work rate increases or if the atmospheric pressure changes.

***Supplied Air Respirator***

The supplied air respirator (SAR) is a unit whose use is not limited to the amount of oxygen one can carry with them into a hazardous atmosphere. SAR's are typically in line with a high-volume/high pressure breathing air cylinder cascade. Alternatively, these respirators may be in line with an air blower, which blows uncontaminated ambient air into the face piece. These types of respirators, regardless of mode of operation, allow the user to remain in the contaminated atmosphere much longer than would be possible with an SCBA. These units are lightweight but limit the range of user mobility. They are normally used when there are extended work periods required in atmospheres that are not IDLH.

***Combination Respirators:***

A combination air-line respirator with auxiliary SCBA is available which provides users with the highest degree of protection possible. These units allow the wearer to escape dangerous atmospheres if the SAR fails during use. These respirators are used when there are extended work periods required in atmospheres that are or may be IDLH.

**VII. Selection of Respirators**

Only respirators that have been certified by the National Institute for Occupational Safety and Health (NIOSH) will be used. Respirators are certified as an assembly, and substitution of parts from other manufacturers or models is strictly prohibited. The respirator shall be used in compliance with the conditions of its certification, and the NIOSH label on the cartridge or filter must not be obscured, removed, or defaced while it is in service. A respirator will be issued by the employees' supervisor to an individual for his or her exclusive use and shall not be used by another employee.

Selection of appropriate respirators will be based on the specific respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability (29CFR 1910.134 (d) (1) (i)). In order to assist employees in determining exposure levels, EH&S will conduct area monitoring to determine workplace hazards such as oxygen deficiency and air contamination by particulates, vapors, or gases. Half-face and full-face air-purifying respirators equipped with the appropriate respirator filters/cartridges will be used to provide protection against specific hazards in atmospheres that are NOT:

- Oxygen deficient
- Immediately dangerous to life and health (IDLH)
- Exceeding the limitations of the selected respirator filters or cartridges

When exposure cannot be identified or reasonably estimated, the atmosphere shall be considered IDLH. In atmospheres where any of the aforementioned hazards exist, employees shall use a positive pressure supplied air respirator equipped with an emergency escape pack.

**VIII. Training**

To ensure the proper and safe use of a respirator, each user will be thoroughly trained at the time of initial fit testing and annually thereafter. The training will be conducted by a member of EH&S. This training will be documented, and information retained by EH&S. The training will include, but not necessarily be limited to:

- Why a respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
- What the limitations and capabilities of the respirator are.
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
- How to inspect, put on and remove, use, and check the seals of the respirator.

- What the procedures are for maintenance and storage of the respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- The nature, extent, and effects of respiratory hazards in the workplace
- The need to inform their supervisors of any problems experienced by them or their coworkers.
- An explanation of why a particular type of respirator has been selected for a specific respiratory hazard.
- Successful completion of a fit test.
- An opportunity to handle a respirator.
- Demonstrate knowledge of the above training elements.
- Employees who voluntarily use respirators need to attend training.

### **IX. Respirator Fit Testing**

All employees required to wear a respirator that has a tight-fitting face piece must be properly fit tested according to OSHA approved procedures. These fit testing procedures shall be performed before the first use of the respirator using the same make, model, style, and size respirator that will be used on the job. Additional fit testing will be performed if a different face piece is to be used or if a supervisor notices a change in the user's physical condition that may compromise the fit of the respirator face piece. Although quantitative fit testing is the preferred and more complete method of verifying the adequacy of the seal, situations may arise where it is not feasible to perform a quantitative fit test (i.e., emergencies, test equipment malfunctions). In the latter situations, qualitative fit testing is an acceptable alternative.

The use of respirators with tight-fitting face pieces to be worn by employees who have facial hair that comes between the sealing surface of the face piece and the face or that which interferes with valve function (i.e., beards, "handlebar" mustaches, sideburns) is prohibited. Other conditions that may prohibit tight-fitting respirator use include, but are not limited to; missing dentures, facial scars, severe acne, or the use of headgear or eyewear that projects under the face piece seal. Respirator use is permitted as long as a condition does not prevent an adequate seal.

Fit testing is performed before initial use of the respirator and at least annually thereafter. The test will be conducted by a trained member of Environmental Health and Safety.

### **X. Use and Maintenance of Respirators**

#### **A. Visual Inspection:**

Without regular respirator inspection, users cannot be sure that they are receiving adequate protection from airborne hazards. In fact, wearing poorly maintained or malfunctioning respirators may be more dangerous than not wearing a respirator at all. The employee's department must replace, repair, or discard a respirator that is not functioning properly, and a defective respirator must, with no exceptions, be replaced or repaired before the user enters or returns to any possibly contaminated area. All respirator users should closely inspect the following parts of the respirator before and after each use and during cleaning (See Appendix C):

**Rubber face piece:**

- Cracked or broken air-purifying element holder(s)
- Excessive dirt
- Cracks, tears, or holes
- Distortion
- Cracked, scratched, or loose-fitting lens (full face)
- Incorrectly mounted full face piece lens or broken/missing mounting clips.

**Head Strap:**

- Breaks or tears.
- Loss of elasticity
- Broken or malfunctioning buckles/attachments
- Excessively worn serrations on head piece
- Harness which might allow the face piece to slip.

**Inhalation/Exhalation Valves:**

- Detergent residue, dust particles, dirt, or hair on valve or valve seat
- Cracks, tears, distortion in valve material or valve seat
- Improper insertion of the valve body in the face piece
- Cracks, breaks, or chips in the valve body, particularly in the sealing surface
- Improper installation of the valve in the valve body

**Filter elements:**

- Incorrect cartridge, canister, or filter for the hazard
- Missing or worn gaskets
- Worn threads.
- Cracks or dents in filter housing
- Incorrect installation, loose connections, or cross-threading in holder
- Outdated use of cartridge or canister (see Section XI: Change-out Schedule)

**B. Seal Checks:**

The wearer of a respirator equipped with a tight-fitting face piece must check the seal of the face piece routinely prior to each entry into a potentially contaminated area. The seal may also be checked during use if the user questions the fit. Either the positive and negative pressure checks listed below, or the respirator manufacturer's recommended user seal check method shall be used. User seal checks are not substitutes for qualitative or quantitative fit tests.

1. Positive pressure check:  
Close off the exhalation valve with the palm of the hand and exhale gently into the face piece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the face piece without any evidence of air leakage at the seal.
2. Negative pressure check:



Close off the inlet opening of the canister(s) or cartridge(s) by covering with the palms of the hands and inhale gently so that the face piece collapses slightly. Hold the breath for ten seconds. The face piece should remain slightly collapsed with no inward leakage.

### **C. Cleaning and Disinfection:**

The individual user following each use should clean respirators. Procedures recommended by the respirator manufacturer or those set forth in the following description may be used: (29CFR 1910.134 App B-2)

1. Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
2. Wash components in warm (43°C/110°F maximum) water with a mild detergent or a disinfectant cleaner recommended by the manufacturer. A stiff bristle (**not wire**) brush may be used to facilitate the removal of dirt.
3. Rinse components thoroughly in clean, warm (43°C/110°F maximum) water, preferably running water. Drain.
4. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
  - a. Hypochlorite solution (50ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43°C/110 °F; or
  - b. Aqueous solution of iodine (50ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100cc of 45% alcohol) to one liter of water at 43° C / 110° F; or
  - c. Other commercially available cleansers of equivalent disinfectant quality when used as directed if their use is recommended or approved by the respirator manufacturer.
  - d. Rinse components thoroughly in clean, warm (43°C/110°F maximum) water, preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
  - e. Components should be hand-dried with a clean, lint-free cloth or air-dried.
  - f. Reassemble face piece, replacing filters, cartridges, and canisters where necessary.
  - g. Test the respirator to ensure that all components work properly.

### **D. Storage:**

“All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed

or stored to prevent deformation of the face piece and exhalation valve.” (29CFR (h) (2) (i)) Respirators should be stored in sealable plastic bags or in containers with tight fitting lids. Respirators should not be hung by their straps as this could cause distortion of the mask area and damage to the straps. Follow the manufacturer’s directions for specific storage requirements.

## **XI. Change-Out Schedule**

A change out schedule is a document that is required by OSHA as of October 1998. It explains how long a particular chemical cartridge or canister used with an air-purifying respirator may be used in a specific work environment. A schedule of this nature is based on objective data obtained through various research institutes, such as NIOSH, and from individual cartridge and canister manufacturers. The schedule may also take into consideration work rate, relative humidity, chemical concentration, and multiple chemical contaminants. To ensure that these cartridges are changed before they are no longer effective, a usage log is necessary (See Appendix D).

Respirator users may no longer rely on warning properties as the sole basis for determining change schedules. However, respirator users should be trained to understand that abnormal odor or irritation is evidence that respirator cartridges need to be replaced. When there is a mix of contaminants, the service life will be based on the contaminant with the shortest breakthrough time. Many manufacturers are now installing End of Service Life Indicators (ESLI’s) on respirator cartridges. An ESLI is a system that changes color, therefore alerting the user that the cartridge must be replaced. The respirator user must strictly follow the manufacturer’s guidelines to prevent health risks.

## **XII. Recordkeeping**

EH&S will record and maintain appropriate documentation of this Respiratory Protection Program. The following is a list of those items that will be documented and who is responsible for each:

- 1. Medical Evaluation** – all documentation will be maintained by the PLHCP.
- 2. Fit testing** – all fit testing documentation will be maintained by EH&S.
- 3. Training** – all initial and follow up training documentation will be maintained by EH&S.

## **XIII. Program Surveillance**

Periodic inspections and program evaluations will be conducted by EH&S to determine the continued effectiveness of the Respiratory Protection Plan. Program updates will be implemented as deemed appropriate by EH&S.

#### **XIV Links to Forms**

Occupational Health Questionnaire

<https://na4.docusign.net/Member/PowerFormSigning.aspx?PowerFormId=a741b800-4725-44e9-94be-0b67b1b57463&env=na4&acct=65b9297b-dbef-4483-b7e5-7750b35143bf&v=2>

Respiratory Protection Questionnaire

[https://www.utep.edu/ehs/\\_Files/docs/ohp\\_docs/Respiratory\\_Protection\\_Questionnaire.pdf](https://www.utep.edu/ehs/_Files/docs/ohp_docs/Respiratory_Protection_Questionnaire.pdf)

Vaccination/Declination form

[https://www.utep.edu/ehs/\\_Files/docs/ohp\\_docs/Vaccine\\_Consent\\_form.pdf](https://www.utep.edu/ehs/_Files/docs/ohp_docs/Vaccine_Consent_form.pdf)

Fit for Duty Report

[https://www.utep.edu/ehs/\\_Files/docs/ohp\\_docs/EHS\\_Fit\\_for\\_Duty\\_Report.pdf](https://www.utep.edu/ehs/_Files/docs/ohp_docs/EHS_Fit_for_Duty_Report.pdf)

UTEP Student Health Center Portal

<https://utep.medicatconnect.com>

#### **XV Contact Information**

Environmental Health and Safety

Phone: 915-747-7162

Email: [eh&s@utep.edu](mailto:eh&s@utep.edu)

Fax: 915-747-8126

UTEP Student Health and Wellness Center

Phone: 915-747-7197

Email: [studenthealth@utep.edu](mailto:studenthealth@utep.edu)

Fax: 915-747-5015

## Appendix A: Medical Questionnaire



### OSHA 29 CFR 1910.134 RESPIRATORY PROTECTION PROGRAM APPENDIX C—QUESTIONNAIRE (MANDATORY)

**To the employee:** Answers to questions in Section 1 and to question 9 in Section 2 of Part A do not require a medical examination.

**Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.**

**Part A. Section 1.** The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's date: \_\_\_\_/\_\_\_\_/\_\_\_\_
2. Your name: \_\_\_\_\_ Student/Employee Id #: \_\_\_\_\_
3. Your age: \_\_\_\_\_
4. Sex (circle one): Male / Female Date of birth: \_\_\_\_\_
5. Your height: \_\_\_\_ ft. \_\_\_\_ in.
6. Your weight: \_\_\_\_ lb.
7. Your job title: \_\_\_\_\_ Dept. \_\_\_\_\_
8. Phone number where you can be reached by the health care professional who reviews this questionnaire (include area code): (\_\_\_\_) \_\_\_\_\_
9. The best time to phone you at this number: \_\_\_\_\_
10. Has your employer told you how to contact the health care professional who will review this questionnaire?  
Yes  No
11. Check the type of respirator you will use (can check more than one category):
  - a. \_\_\_\_ N, R, or P disposable respirator (filter-mask, non-cartridge type only)
  - b. \_\_\_\_ other type (half-or full-facepiece type, powered air purifying, supplied air, self-contained breathing apparatus)
12. Have you worn a respirator? Yes  No   
if yes, what type(s): \_\_\_\_\_

**Part A. Section 2.** Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please check "yes" or "no").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month? Yes  No   
If "yes," indicate: How many packs a day do you smoke: <math>\frac{1}{4}</math>  $\frac{1}{2}</math>  $\frac{3}{4}</math> 1 2 3 4  
How many years have you smoked: _____?$$
2. Have you ever had any of the following conditions? Yes  No 
  - a. Seizures: \_\_\_\_\_  
If you answered "yes," when was the last time \_\_\_\_\_
  - b. Diabetes (sugar disease): Yes  No   
If "yes," do you have spells of hypoglycemia (low blood sugar): Yes  No
  - c. Allergic reactions that interfere with your breathing: Yes  No   
If "yes," did you have problems in the past year: Yes  No

- d. Claustrophobia (fear of closed-in places): Yes  No   
 If "yes," did you have problems in the past year: Yes  No   
 e. Trouble smelling odors: Yes  No
3. Have you ever had any of the following pulmonary or lung problems?
- a. Asbestosis: Yes  No   
 b. Asthma: Yes  No   
 If "yes," when did you have your last episode? \_\_\_\_\_  
 c. Chronic bronchitis: Yes  No   
 d. Emphysema: Yes  No   
 e. Pneumonia: Yes  No   
 If "yes," when did you have your last episode? \_\_\_\_\_  
 f. Tuberculosis: Yes  No   
 If "yes," were you treated for it? Yes  No   
 For how long did you take medication? \_\_\_\_\_  
 g. Silicosis: Yes  No   
 h. Pneumothorax (collapsed lung): Yes  No   
 i. Lung cancer: Yes  No   
 If "yes," were you treated for it: Yes  No   
 List whether you took chemotherapy, radiation, or surgery: \_\_\_\_\_  
 Are you considered as "cured" at this time: Yes  No   
 j. Broken ribs: Yes  No   
 k. Any chest injuries or surgeries: Yes  No   
 l. Any other lung problem that you have been told about: Yes  No
4. Do you *currently* have any of the following symptoms of pulmonary or lung illness?
- a. Shortness of breath: Yes  No   
 b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes  No   
 c. Shortness of breath when walking with other people at an ordinary pace on level ground: Yes  No   
 d. Have to stop for breath when walking at your own pace on level ground: Yes  No   
 e. Shortness of breath when washing or dressing yourself: Yes  No   
 f. Shortness of breath that interferes with your job: Yes  No   
 g. Coughing that produces phlegm (thick sputum): Yes  No   
 h. Coughing that wakes you early in the morning: Yes  No   
 i. Coughing that occurs mostly when you are lying down: Yes  No   
 j. Coughing up blood in the last month: Yes  No   
 k. Wheezing: Yes  No   
 l. Wheezing that interferes with your job: Yes  No   
 m. Chest pain when you breathe deeply: Yes  No   
 n. Any other symptom that you think may be related to lung problems: Yes  No
5. Have you ever had any of the following cardiovascular or heart problems?
- a. Heart attack: Yes  No   
 If "yes," when was it? \_\_\_\_ within the past 6 mo. / \_\_\_\_ >6 mo. ago  
 b. Stroke: Yes  No   
 If "yes," when was it? \_\_\_\_ within past 6 mo. / \_\_\_\_ >6 mo. ago  
 c. Angina: Yes  No   
 If "yes," how often does it occur? \_\_\_\_\_  
 d. Heart failure: Yes  No   
 If "yes," when was it? \_\_\_\_\_  
 e. Swelling in your legs or feet (not caused by walking): Yes  No   
 f. Heart arrhythmia (heart beating irregularly): Yes  No   
 If "yes," does this make you pass out or light headed? Yes  No   
 g. High blood pressure: Yes  No   
 h. Any other heart problem that you've been told about: Yes  No   
 Please give detail: \_\_\_\_\_

6. Have you ever had any of the following cardiovascular or heart symptoms?
- a. Frequent pain or tightness in your chest: Yes  No
- b. Pain or tightness in your chest during physical activity: Yes  No
- c. Pain or tightness in your chest that interferes with your job: Yes  No
- d. In the past two years, have you noticed your heart skipping or missing a beat: Yes  No
- e. Heartburn or indigestion that is not related to eating: Yes  No
- f. Any other symptoms that you think may be related to heart or circulation problems:  
Yes  No
- Circle the "yes" answers that were in the last 6 months: a b c d e f
7. Do you currently take medication for any of the following problems?
- a. Breathing or lung problems: Yes  No
- b. Heart problems: Yes  No
- c. Blood pressure: Yes  No
- d. Seizures: Yes  No
- List the medications: \_\_\_\_\_
8. If you've used a respirator, have you ever had any of the following problems?  
(If you've never used a respirator, check the following space \_\_\_ and go to question 9.)
- a. Eye irritation: Yes  No
- b. Skin allergies or rashes: Yes  No
- c. Anxiety: Yes  No
- d. General weakness or fatigue: Yes  No
- e. Any other problem that interferes with your use of a respirator: Yes  No
- Circle the "yes" answers that were in the last 6 months: a b c d e f
9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire? Yes  No
10. Have you ever lost vision in either eye (temporarily or permanently)? Yes  No
11. Do you currently have any of the following vision problems?
- a. Wear contact lenses: Yes  No
- b. Wear glasses: Yes  No
- c. Color blind: Yes  No
- d. Any other eye or vision problem: Yes  No
12. Have you ever had an injury to your ears, including a broken eardrum? Yes  No
13. Do you currently have any of the hearing problems?
- a. Difficulty hearing: Yes  No
- b. Wear a hearing aid: Yes  No
- c. Any other hearing or ear problems: Yes  No
14. Have you ever had a back injury: Yes  No
15. Do you currently have any of the following musculoskeletal problems?
- a. Weakness in any of your arms, hands, legs, or feet: Yes  No   
If "yes," specify which part: \_\_\_\_\_
- b. Back pain: Yes  No   
If "yes," specify where it hurts: \_\_\_\_\_, how often: \_\_\_\_\_,  
Do you take medication? Yes  No   
If "yes," name the medicine(s) \_\_\_\_\_  
Have you had surgery on your back? Yes  No
- c. Difficulty fully moving your arms and legs: Yes  No   
If "yes," specify which part: \_\_\_\_\_
- d. Pain or stiffness when you lean forward or backward at the waist: Yes  No
- e. Difficulty moving your head up or down: Yes  No
- f. Difficulty moving your head side to side: Yes  No
- g. Difficulty bending at your knees: Yes  No
- h. Difficulty squatting to the ground: Yes  No

- i. Climbing a flight of stairs or a ladder carrying more than 25 lbs.: Yes  No
- j. Any other muscle or skeletal problem that interferes with using a respirator: Yes  No

Any additional comments you would like to make: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

To the best of my knowledge, the information I have provided is true and accurate.

Employee signature \_\_\_\_\_ Date \_\_\_\_\_

## Appendix B: Respirator User's Approval Document



On \_\_\_\_ / \_\_\_\_ / \_\_\_\_, I do hereby attest that upon reviewing the medical questionnaire  
(Date)

and based on my best medical judgment, \_\_\_\_\_ is approved to wear the following respirators:  
(Name)

\_\_\_\_\_ Filtering Face Piece (N-95)

\_\_\_\_\_ Half-face Mask Respirator

\_\_\_\_\_ Full-face Mask Respirator

\_\_\_\_\_ Powered Air Purifying Respirator (PAPR)

\_\_\_\_\_ required to come in for a medical evaluation before respirator clearance can be given.

\_\_\_\_\_ approved with the following conditions: \_\_\_\_\_

---

---

---

\_\_\_\_\_ not approved for respirator use.

\_\_\_\_\_  
Signature of PLHCP

\_\_\_\_\_  
Date





## Appendix C: Respirator Use and Maintenance Log Respiratory Protection Program

Respirator Type: \_\_\_\_\_ Respirator I.D. #: \_\_\_\_\_

Manufacturer: \_\_\_\_\_ Date Placed in Service: \_\_\_\_\_

Model Number: \_\_\_\_\_ Date of Inspection: \_\_\_\_\_

**I. Visual Inspection**

**A. Rubber Face Piece**

- |   |     |    |
|---|-----|----|
| 1. Is the face piece cracked or broken?   | YES | NO |
| 2. Does it have excessive dirt?   | YES | NO |
| 3. Are there cracks, tears or holes   | YES | NO |
| 4. Is the Lens cracked, scratched, or loose-fitting lens (full face)                      | YES | NO |
| 5. Are there incorrectly mounted full face piece lens<br>Or broken/missing mounting clips | YES | NO |

**B. Head Strap**

- |   |     |    |
|---|-----|----|
| 1. Is the head strap broken or torn                                   | YES | NO |
| 2. Has it lost its elasticity   | YES | NO |
| 3. Is it broken or have malfunctioning buckles/missing<br>Attachments | YES | NO |
| 4. Are there excessive worn serrations on head piece                  | YES | NO |
| 5. Is the harness allowing the face piece to slip                     | YES | NO |

**C. Inhalation/Exhalation Valves**

- |   |     |    |
|---|-----|----|
| 1. Is there detergent residue, dust particles, dirt or hair<br>On valve or valve seat | YES | NO |
| 2. Are there cracks, tears, or distortion in the valve material<br>or valve seat      | YES | NO |
| 3. Is there improper insertion of the valve body in the face piece                    | YES | NO |

**D. Filter Elements**

- |  |     |    |
|--|-----|----|
| 1. Is the correct cartridge, canister, or filter being used for the hazard             | YES | NO |
| 2. Does it have missing or worn gaskets  | YES | NO |
| 3. Are there worn threads  | YES | NO |
| 4. Are there cracks or dents in filter housing   | YES | NO |
| 5. Is there incorrect installation, loose connections,<br>or cross-threading in holder | YES | NO |
| 6. Does it have an outdated cartridge or canister                                      | YES | NO |

**II. Seal Checks**

- |  |     |    |
|--|-----|----|
| 1. Is the mask able to sustain a positive seal | YES | NO |
| 2. Is the mask able to sustain a negative seal | YES | NO |

NOTES:

---



---



---



**Appendix D: Respirator/Cartridge Usage Log**

Date	Name/Type of Hazardous Material (e.g., acetone, oil-based paint, etc.)	Time In (HR:MM)	Time Out (HR:MM)	Total Hours Used	PAPR				
					PAPR Type	Battery Charge 100 % (Yes OR No)	Airflow (OK,Low)	Shroud Condition (Poor,Fair,Good)	Helmet & Shield (Poor,Fair,Good)

### Respirator/Cartridge Usage Log

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

Type of respirator: \_\_\_\_\_

Date	Name/Type of Hazardous Material (e.g., acetone, oil-based paint, etc.)	Time In (HR:MM)	Time Out (HR:MM)	Total Hours Used	Full Face and Half Face mask				
					Cartridge Type	Cartridge Condition (New or Used)	Rubber Face Piece condition (Poor,Fair,Good)	Head Strap condition (Poor,Fair,Good)	Inhalation/Exhalation Valves condition (Poor,Fair,Good)

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

Type of respirator: \_\_\_\_\_