

# Sample Respiratory Protection Program for Spray Polyurethane Foam Applications



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## Introduction

This sample respiratory protection program provides a working template for your organizations respiratory protection program; however the employer must evaluate the tasks and work environment to adequately protect the employees and ensure compliance with OSHA regulations. You are encouraged to use this sample program to develop your organizations written respiratory protection program.

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# Respiratory Protection Program

## Purpose

Some employees of [INSERT YOUR COMPANY NAME] perform tasks that require the use of respiratory protection and based on this exposure, we have elected to include in our health & safety policy manual, regulations that govern the expected safe work practices when working with respiratory protection. Contractors are expected to follow these standards as part of fulfilling their contract with [INSERT YOUR COMPANY NAME].

The purpose of this program is to inform interested persons, including employees that [INSERT YOUR COMPANY NAME] is complying with the OSHA Respiratory Protection Standard, Title 29 Code of Federal Regulations 1910.134. This program applies to all work operations where employees or contractors may be exposed to hazards that require respiratory protection.

Furthermore, this program serves to demonstrate to employees and independent contractors the safety standards we follow. This program applies to all work operations where employees or contractors may be exposed to hazards that require respiratory protection.

## Policy

This Respiratory Protection Program specifies standard operating procedures to protect all employees and independent contractors from respiratory hazards, according to the requirements of 29 CFR 1910.134. Respirators are to be used only where engineering control of respirator hazards is not feasible, while engineering controls are being installed, or in emergencies.

## Administrative Duties

The Respiratory Protection Program is administered by the Safety Manager. The Safety Manager is responsible for all facets of the program and has full authority to make necessary decisions to ensure success of this program. This authority includes purchasing equipment necessary to implement and operate the program.

The Safety Manager will develop written detailed instructions covering each of the basic elements in this program, and is the solely authorized to amend these instructions. The members of this team are qualified, by appropriate training and experience that is commensurate with the complexity of the program, to administer or oversee our Respiratory Protection Program and conduct the required evaluations of program effectiveness.

Employees may review a copy of our Respiratory Protection Program. It is located in the corporate office. The Safety Manager reviews this program periodically to ensure its effectiveness.

## Respirator Selection

Respirators are selected on the basis of respiratory hazards to which the worker is exposed and workplace and user factors that affect respirator performance and reliability. All selections are made by the Safety Manager.

The Safety Manager has developed detailed written standard operating procedures governing the selection of respirators using the following guidelines:

*When selecting any respirator in general:*

- Select and provide respirators based on respiratory hazard(s) to which a worker is exposed and workplace and user factors that affect respirator performance and reliability. The product MSDS will usually provide direction in respirator selection.
- Select a NIOSH-certified (National Institute for Occupational Safety and Health) respirator.
- Identify and evaluate the respiratory hazard(s) in the workplace, including a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Consider the atmosphere to be immediately dangerous to life or health (IDLH) if you cannot identify or reasonably estimate employee exposure.
- Select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

*When selecting respirators for IDLH atmospheres:*

Provide these respirators:

- A full facepiece pressure demand self-contained breathing apparatus (SCBA) certified by NIOSH for a minimum service life of thirty minutes, or
- A combination full facepiece pressure demand supplied-air respirator Self-contained breathing apparatus (SAR) with auxiliary self-contained air supply.
- Provide respirators NIOSH-certified for escape from the atmosphere in which they will be used when they are used only for escape from IDLH atmospheres.

We consider all oxygen-deficient atmospheres to be IDLH.

*When selecting respirators for atmospheres that are not IDLH:*

We provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations.

For protection against gases and vapors, provide:

- An atmosphere-supplying respirator, or
- An air-purifying respirator, provided that:

(1) The respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or

(2) If there is no ESLI appropriate for conditions in our workplace, implement a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.

Outside consultation, manufacturer's assistance, and other recognized authorities will be consulted if there is any doubt regarding proper selection.

### **Respirator Types and Uses**

The types of respirators in use vary depending on the task and the chemicals used. Only NIOSH-certified respirators are selected and used. Where practicable, the respirators will be assigned to individual workers for their exclusive use.

| <b>Respirator Type</b>                     | <b>Purpose / Area used</b> | <b>Affected</b>  |
|--|----------------------------|------------------|
| Dust Mask                                  | General comfort only       | Voluntary Use    |
| Half face-piece w/Organic (P100) Cartridge | Exterior Applications      | Sprayer & Helper |
| Hood or Full face Supplied Air             | Interior Applications      | Sprayer & Helper |
| Other                                      | As required by MSDS        | Per MSDS         |

### **Mandatory Medical Evaluations**

A medical evaluation to determine whether an employee is able to use a given respirator is an important element of an effective Respiratory Protection Program and is necessary to prevent injuries, illnesses, and even, in rare cases, death from the physiological burden imposed by respirator use.

At **[INSERT YOUR COMPANY NAME HERE]**, persons will not be assigned to tasks requiring use of respirators nor fit tested unless it has been determined by a "Physician or Other Licensed Health Care Professional" that they are physically able to perform the work and use the respirator.

PHYSICIAN OR OTHER LICENSED HEALTH CARE PROFESSIONAL (PLHCP) means an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by 29 CFR 1910.134(e), Medical Evaluation.

Before any initial examination or questionnaire is given, we supply the PLHCP with the following information so that he/she can make the best recommendation concerning an employee's ability to use a respirator:

- Type and weight of the respirator to be used by the employee;
- Duration and frequency of respirator use (including use for rescue and escape);
- Expected physical work effort;

- Additional protective clothing and equipment to be worn;
- Temperature and humidity extremes that may be encountered.
- OSHA’s Mandatory Medical Evaluation Questionnaire (see “Request for Medical Clearance – Respirator Use Questionnaire” in the following section of this chapter)

Once the PLHCP determines whether the employee has the ability to use or not use a respirator, he/she sends [INSERT YOUR COMPANY NAME] a written recommendation containing only the following information:

- Limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
- The need, if any, for follow-up medical evaluations; and
- A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

Follow-up medical examination:

A follow-up medical examination will be provided if an employee's initial medical examination demonstrates the need for a follow-up medical examination. Our follow-up medical examination includes tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.

Additional medical examinations:

Our company provides additional medical evaluations if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator;
- A PLHCP, supervisor, or the respirator program administrator informs the employer that an employee needs to be reevaluated;
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

## Request for Medical Clearance – Respirator Use Questionnaire

1. Today's date: \_\_\_\_\_
  2. Your name: \_\_\_\_\_
  3. Your age (to nearest year): \_\_\_\_\_
  4. Sex (circle one): Male/Female
  5. Your height: \_\_\_\_\_ ft. \_\_\_\_\_ in.
  6. Your weight: \_\_\_\_\_ lbs.
  7. Your job title: \_\_\_\_\_
  8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the 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 (circle one): Yes/No
  11. Check the type of respirator you will use (you can check more than one category):
    - a. \_\_\_\_\_ N, R, or P disposable respirator (filter-mask, non- cartridge type only).
    - b. \_\_\_\_\_ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).
  12. Have you worn a respirator (circle one): Yes/No
- If "yes," what type(s): \_\_\_\_\_

### **Section 2.**

**Directions: Please circle "Yes" or "No" to the following questions.**

1. Do you **currently** smoke tobacco, or have you smoked tobacco in the last month: Yes/No
2. Have you **ever had** any of the following conditions?
  - a. Seizures (fits): Yes/No



- b. Diabetes (sugar disease): Yes/No
- c. Allergic reactions that interfere with your breathing: Yes/No
- d. Claustrophobia (fear of closed-in places): 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
- c. Chronic bronchitis: Yes/No
- d. Emphysema: Yes/No
- e. Pneumonia: Yes/No
- f. Tuberculosis: Yes/No
- g. Silicosis: Yes/No
- h. Pneumothorax (collapsed lung): Yes/No
- i. Lung cancer: Yes/No
- j. Broken ribs: Yes/No
- k. Any chest injuries or surgeries: Yes/No
- l. Any other lung problem that you've 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 symptoms 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
- b. Stroke: Yes/No
- c. Angina: Yes/No
- d. Heart failure: Yes/No
- e. Swelling in your legs or feet (not caused by walking): Yes/No

- f. Heart arrhythmia (heart beating irregularly): Yes/No
- g. High blood pressure: Yes/No
- h. Any other heart problem that you've been told about: Yes/No

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

7. Do you **currently** take medication for any of the following problems?

- a. Breathing or lung problems: Yes/No
- b. Heart trouble: Yes/No
- c. Blood pressure: Yes/No
- d. Seizures (fits): Yes/No

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

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes/No

*Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.*

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 ear drum: Yes/No

13. Do you **currently** have any of the following hearing problems?

- a. Difficulty hearing: Yes/No
- b. Wear a hearing aid: Yes/No
- c. Any other hearing or ear problem: 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
- b. Back pain: Yes/No
- c. Difficulty fully moving your arms and legs: Yes/No
- d. Pain or stiffness when you lean forward or backward at the waist: Yes/No
- e. Difficulty fully moving your head up or down: Yes/No
- f. Difficulty fully 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

Employee Name (print): \_\_\_\_\_

Employee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Physician Name (print): \_\_\_\_\_

Physician Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **Qualitative / Quantitative Fit Testing**

Once a medical evaluation is received from a PLHCP which gives clearance to the employee to use a respirator, the employee must next be fit tested. A respirator must fit properly to provide protection. If a tight seal is not maintained between the facepiece and the employee's face, contaminated air will be drawn into the facepiece and be breathed by the employee. Fit testing seeks to protect the employee against breathing contaminated ambient air and is one of the core provisions of our respirator program.

In general, fit testing may be either qualitative or quantitative. Qualitative fit testing (QLFT) involves the introduction of a gas, vapor, or aerosol test agent into an area around the head of the respirator user. If that user can detect the presence of the test agent through subjective means, such as odor, taste, or irritation, the respirator fit is inadequate.

In a Quantitative respirator fit test (QNFT), the adequacy of respirator fit is assessed by measuring the amount of leakage into the respirator, either by generating a test aerosol as a test atmosphere, using ambient aerosol as a test agent, or using controlled negative pressure to measure the volumetric leak rate. Appropriate instrumentation is required to quantify respirator fit in QNFT. Unless specified otherwise on the Material Safety Data Sheet, [INSERT YOUR COMPANY NAME] uses Qualitative fit testing (QLFT).

### **Fit Testing Procedures**

When fit testing is administered, the following procedures will be followed:

- 1) Prior to the selection process, the employee shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the employee in evaluating the fit and positioning of the respirator.
- 2) The employee will pick the respirator that correctly fits from the selection at hand.
- 3) The employee shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.
- 4) The employee shall be instructed to hold each chosen facepiece up to the face and eliminate those that do not give an acceptable fit.
- 5) The more acceptable facepieces are noted in case the one selected proves unacceptable. The most comfortable mask is donned and worn for at least 5 minutes to assess comfort. If the employee is not familiar with a particular respirator, the employee shall be directed to don the mask several times and to make adjustments to the straps each time to become aquatinted with setting the proper tension of the straps.

To assess the comfort of the mask follow the steps shown below:

- Position the mask on the nose.
- Make sure there is room for eye protection.
- Make sure you have room to talk.
- Position the mask on the face and cheeks.

The following will assist in determination of the respirator fit:

- Chin properly placed
  - Adequate strap tension not overly tightened.
  - Fit across nose bridge.
  - A respirator of proper size will span the distance from nose to chin.
  - There should not be a feeling that the respirator is slipping.
  - Self-observation in a mirror will assist in positioning and fit.
- 6) The employee will perform a user seal check. A negative and positive pressure check is the method used at **[INSERT YOUR COMPANY NAME HERE]**. Before conducting the test the employee shall seat the mask on the face by moving the head from side to side and up and down slowly while taking a few slow deep breaths. Another facepiece will be selected if the employee fails the user seal check.
  - 7) The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surfaces, such as stubble, beard growth, mustache, beard, or sideburns which cross the respirator sealing surface. Any type of apparel, which interferes with a satisfactory fit, shall be removed or altered.
  - 8) If the employee exhibits difficulty in breathing during the test, she or he will be referred to a physician or other licensed health care professional to determine whether the employee can wear a respirator while performing his or her duties.
  - 9) If the employee finds the fit of the respirator unacceptable, the employee may select a different respirator and be re-tested.
  - 10) Exercise regimen. A description of the fit test and the responsibilities the employee must adhere to during the test. The description shall include the exercises and an explanation of how to perform them. The respirator to be used in the test will be worn 5 minutes before the start of the fit test.
  - 11) Other Personal Protective Equipment the employee will wear as normal part of the work process must be worn during the test.

### Test exercises

The employee shall perform the following exercises in the order given below, in the environment the respirator will be worn:

**Normal breathing.** In a normal standing position, without talking the employee shall breathe normally.

**Deep breathing.** In a normal standing position, the employee shall breathe slowly and deeply, taking caution so as not to hyperventilate.

**Turning head side to side.** Standing in place, the employee shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the employee can inhale at each side.

**Moving head up and down.** Standing in place, the employee shall slowly move his/her head up and down. The employee shall be instructed to inhale at the up position (i.e. when looking toward the ceiling).

**Grimace.** The employee shall grimace by smiling or frowning. (This applies only to QNFT testing, it is not performed for QLFT.)

**Bending over.** The employee shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT or QLFT units that do not permit bending over at the waist.

**Talking.** The employee shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The employee can read from prepared text such as the Rainbow Passage (see below), count backward from 100, or recite a memorized poem or song.

**Rainbow Passage:** *When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.*

**Normal Breathing.** Same as at the beginning.

Each test exercise shall be performed for one minute except for the grimace exercise, which shall be performed for 15 seconds. The employee shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become

unacceptable, another model respirator shall be tried. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

*Respirator Fit Test Record*

At the conclusion of a successful fit test, the person conducting the fit test shall complete the "Respirator Fit Test Record" (see next section). The fit tester and the employee tested shall sign and date the document. The person conducting the fit testing shall next forward this document to the Safety Manager. The Safety Manager will review the document and sign it. The completed record shall be kept in the employees personnel file for the duration of the employees' employment with **[INSERT YOUR COMPANY NAME HERE]**.

## Respirator Fit Test Record

Employee: (print name) \_\_\_\_\_

Social Security Number: \_\_\_\_\_

Department: \_\_\_\_\_ Job Title: \_\_\_\_\_

Type of Respirator Used: \_\_\_\_\_

Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

### Conditions that could affect respirator fit:

- Clean Shaven
- 1-2 Day Beard Growth
- 2 + Days Beard Growth
- Moustache
- None of the Above
- Facial Scar
- Dentures Absent
- Glasses

### Fit Checks:

Negative Pressure (circle one):                      Pass              Fail              N/A

Positive Pressure (circle one):                      Pass              Fail              N/A

### Qualitative Fit Test:

Bitrex™ Solution Aerosol (circle one):              Pass              Fail              N/A

Saccharin Solution (circle one):                      Pass              Fail              N/A

### Acknowledgement:

Employee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Test Conducted By: \_\_\_\_\_ Date: \_\_\_\_\_

Review By Safety Manager: \_\_\_\_\_ Date: \_\_\_\_\_



### **Fit Testing Schedule**

The fit testing schedule is as follows:

- Before any of our employees are required to use any respirator with a negative or positive pressure tight-fitting facepiece;
- Whenever a different respirator facepiece (size, style, model, or make) is used;
- At least annually;
- Whenever a supervisor or Safety Manager makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight; and
- When the employee, subsequently after passing a QLFT or QNFT, notifies the company, supervisor or PLHCP that the fit of the respirator is unacceptable, that employee will be retested with a different respirator facepiece.

### **Facepiece Seal Protection**

Do not permit respirators with tight-fitting facepieces to be worn by employees who have:

- Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function; or
- Any condition that interferes with the face-to-facepiece seal or valve function.
- If an employee wears corrective glasses or goggles or other personal protective equipment, ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

For all tight-fitting respirators, ensure that employees perform a user seal check each time they put on the respirator.

### **Continuing Respirator Effectiveness**

Appropriate surveillance must be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, reevaluate the continued effectiveness of the respirator.

Ensure that employees leave the respirator use area:

- To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use; or
- If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece; or
- To replace the respirator or the filter, cartridge, or canister elements.

If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, replace or repair the respirator before allowing the employee to return to the work area.

### **Maintenance and Care Procedures**

In order to ensure continuing protection from respiratory protective devices, it is necessary to establish and implement proper maintenance and care procedures and schedules. A lax attitude toward maintenance and care will negate successful selection and fit because the devices will not deliver the assumed protection unless they are kept in good working order.

### **Cleaning & Disinfecting Policy**

[INSERT YOUR COMPANY NAME] provides each respirator user with a respirator that is clean, sanitary, and in good working order. We ensure that respirators are cleaned and disinfected using the following schedule:

- Respirator issued for the exclusive use of an employee must be cleaned and disinfected as often as necessary to be maintained in a sanitary condition.
- Respirators issued to more than one employee must be cleaned and disinfected before being worn by different individuals.
- Respirators maintained for emergency use must be cleaned and disinfected after each use.
- Respirators used in fit testing and training must be cleaned and disinfected after each use.

### **Cleaning & Disinfecting Procedure**

This procedure is provided for the employee's use when cleaning and disinfecting respirators. They are general in nature, alternative methods, including the respirator manufacturer's instruction may be used providing it meets or exceeds those given below.

#### Instructions

- Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- Wash components in warm (43°C [110°F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- Rinse components thoroughly in clean, warm (43°C [110°F] maximum), preferably running water and drain.
- 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 (50 ppm 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 (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodine/100 cc 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.
- Rinse components thoroughly in clean, warm (43°C [110°F] maximum), preferably running water and drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
  - Components should be hand dried with a lint free cloth or air-dried.
  - Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
  - Test the respirator to ensure all components work properly.

### **Storage**

Storage of respirators must be done properly to ensure that the equipment is protected and not subject to environmental conditions that may cause deterioration. We ensure that respirators are stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals. In addition, emergency respirators are kept accessible to the work area and are clearly marked as containing emergency respirators; and stored in accordance with any applicable manufacturer instructions.

### **Inspection**

In order to assure the continued reliability of respirator equipment, it must be inspected on a regular basis. The frequency of inspection is related to the frequency of use. Here are our frequencies for inspection:

1. All types used in routine situations
  - Before each use and during cleaning
2. Maintained for use in emergency situations
  - At least monthly and in accordance with the manufacturer's recommendations, and checked for proper function before and after each use
3. Emergency escape-only respirators
  - Before being carried into the workplace for use

Any one of our respirator inspections includes a check:

1. For respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters; and

2. Of elastomeric parts for pliability and signs of deterioration.

### **Repairs**

Respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired.

Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and only with the respirator manufacturer's NIOSH-approved parts designed for the respirator. Repairs must be made according to the manufacturer's recommendations.

### **Discarding of Respirators**

Respirators that fail an inspection or are otherwise not fit for use and cannot be repaired must be discarded. The respirator is marked as "unsafe" and the elastomeric headband is removed. Additionally a red tag should be attached to the respirator that reads "Unsafe for use – discard".

### **Training**

The most thorough respiratory protection program will not be effective if employees do not wear respirators, or if wearing them, do not do so properly. The only way to ensure that our employees are aware of the purpose of wearing respirators, and how they are to be worn is to train them. Simply put, employee training is an important part of the respiratory protection program and is essential for correct respirator use.

Our training program is two-fold; it covers both the:

- Respiratory hazards to which our employees are potentially exposed during routine and emergency situations, and
- Proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance.

Both training parts are provided prior to requiring an employee to use a respirator in our workplace. However, if an employee has received training within 12 months addressing the seven basic elements of respiratory protection (see "Basic Training Elements" below) and **[INSERT YOUR COMPANY NAME]** and the employee can demonstrate that he/she has knowledge of those elements, then that employee is not required to repeat such training initially.

Yet, we do require all of our employees to be retrained annually and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete;
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

Upon completion of the respirator training program, the Trainer, Employee and Safety Manager shall certify the training by completing a “Respiratory Protection Training Certification” (see sample at the end of this Chapter).

The Safety Manager shall file the completed record for the duration of the employees’ employment with **[INSERT YOUR COMPANY NAME HERE]**.

### **Basic Training Elements**

Our employees are trained sufficiently to be able to demonstrate knowledge of at least these basic elements:

- Why the 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 where the respirator malfunctions.
- How to inspect, put on, take off, use and check the seals of the respirator.
- What procedures are used for maintenance and storage of the respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of the respirator.
- An understanding that employee owned respirators cannot be used unless approved by the employee’s manager and the Safety Manager.
- An understanding that respirators cannot be worn in areas where respiratory protection is not required.
- The general requirements of the *Respiratory Protection Program*.

### **Program Evaluation**

It is inherent in respirator use that problems with protection, irritation, breathing resistance, comfort, and other respirator-related factors occasionally arise in most respirator protection programs. Although it is not possible to eliminate all problems associated with respirator use, we try to eliminate as many problems as possible to improve respiratory protection and encourage employee acceptance and safe use of respirators. By having our program administrator thoroughly evaluate and, as necessary, revise our Respiratory Protection Program, we can eliminate problems effectively.

The Safety Manager evaluates the performance of our employees and independent contractors as it relates to respiratory protection and makes revisions to this program as needed. Program evaluation, performed annually by the Safety Manager involves the following:

- Conducting evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

- Regularly consulting employees required to use respirators to assess their views on program effectiveness and to identify any problems.

Any problems that are identified during this assessment must be corrected. Factors to assess include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance)
- Appropriate respirator selection for the hazards to which the employee is exposed
- Proper respirator use under the workplace conditions the employee encounters
- Proper respirator maintenance

## Respiratory Protection Training Certification

This is to certify that the following training criteria have been delivered to the employee listed below:

- Why the 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 where the respirator malfunctions.
- How to inspect, put on, take off, use and check the seals of the respirator.
- What 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 the respirator.
- An understanding that employee owned respirators can not be used unless approved by the employee's manager and the Safety Manager.
- An understanding that respirators can not be worn in areas where respiratory protection is not required.
- The general requirements of the *Respiratory Protection Program*.

### Training Style (check one):

- Initial (New Employee)
- Annual Training
- Retraining

I have demonstrated an understanding of the above topics to the trainer. I understand that retraining will be required if there are changes in the work process, type of respiratory protection changes, if I display a need to be retrained or at the discretion of management.

Employee Printed Name: \_\_\_\_\_

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

Social Security Number: \_\_\_\_\_ Date: \_\_\_\_\_

Trainer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Safety Managers Signature: \_\_\_\_\_ Date: \_\_\_\_\_