# **The Respiratory Protection Standard**

### I. Evaluation of the Workplace

- 1. The employer shall identify and evaluate the respiratory hazards in the workplace.
- 2. This evaluation shall include a reasonable estimate of employee exposure to respiratory hazards and identification of the contaminant's chemical state and physical form.
- 3. Where the employer cannot identify or reasonably estimate the employee exposure, the employer shall consider the atmosphere to be *immediately dangerous to life or health*.

### **II.** Written Program

- 1. The employer shall establish and implement a written respiratory protection program with worksitespecific procedures. The program must include:
  - A. Procedures for selecting respirators for the workplace.
  - B. Medical evaluations for employees required to use respirators.
  - C. Fit testing procedures for tight-fitting respirators.
  - D. Procedures for proper use of respirators in routine and reasonable foreseeable emergency situations.
  - E. Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding and otherwise maintaining respirators.
  - F. Procedures to ensure adequate air quality, quantity and flow of breathing air for atmosphere-supplying respirators.
  - G. Training of employees in the respiratory hazards to which they are potentially exposed during routing and emergency situations.
  - H. Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use and their maintenance.
  - I. Procedures for regularly evaluating the effectiveness of the program.

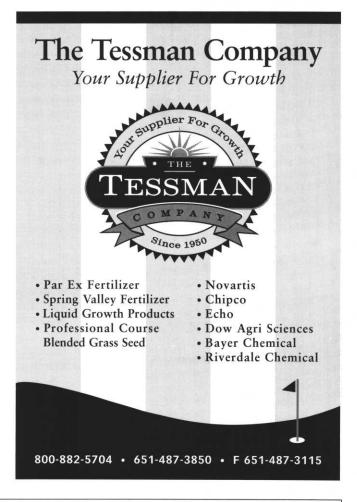
### **III. Medical Evaluation**

The employer shall provide a medical evaluation to determine the employee's ability to use a respirator before the employee is fit tested or required to use the respirator in the workplace.

 The employer shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire. (Medical evaluation questionnaire – 29 CFR Appendix C to 1910.134: OSHA Respirator Medical Evaluation Questionnaire)

- 2. The medical questionnaire and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee.
- 3. The medical questionnaire shall be administered in a manner that ensures that the employee understands its content.
- 4. The employer shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.
- 5. The employer shall ensure that a follow-up medical examination is provided for an employee who gives a positive response to any question among questions 1 through 8 in Section 2, Part A of Appendix C or whose initial medical examination demonstrates the need for a follow-up medical examination.
- 6. Additional information must be provided to the PLHCP prior to the medical determination. This information is itemized in 29 CFR 1910.134(e).

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- 7. In determining the employee's ability to use a respirator, the employer shall:
  - A. Obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP which includes: (1) any limitations on respirator use including whether or not the employee is medically able to use the respirator, (2) the need, if any, for followup medical evaluations and (3) a statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.
  - B. **Do not assign a task that requires the use of a respirator** to an employee for whom the PLHCP has identified medical limitations.
  - C. Provide additional medical examinations for employees already examined when reasonable and necessary (See 29 CFR 1910.134(e)).

### **IV.** Testing

- 1. Before an employee may be required to use any respirator with a negative or postive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. Fit test protocols can be found in 29 CFR Appendix A to 1910.134.
- 2. The employer shall ensure that an employee using a tight-fitting facepiece respirator is fit tested (1) prior to initial use of the respirator, (2) whenever a different respirator facepiece is used, (3) at least annually and (4) whenever visual observations of changes in the employee's physical condition are reported that could affect respirator fit.

### V. Training

The employer must ensure that each employee can demonstrate knowledge of at least the following:

- 1. Why the respirator is necessary and how improper fit, usage or maintenance can compromise the protective effect of the respirator.
- 2. What the limitations and capabilities of the respirator are.

### **RESPIRATORY PROTECTION TRAINING**

Air Purifying Respirator Training Module

Materials needed:

- Air Purifying Respirators
- Cartridges
- Storage Bags
- Mild Soap and Water or Cleaner Sanitizer
- Slides, overheads or flip chart

This workshop assumes that all employees wearing respiratory protection have been examined and approved by a physician and a successful fit test has been completed.

The air purifying respirator works by the wearer inhaling air through the air-purifying cartridges. All the oxygen that the wearer receives comes through the cartridges.

Since this device does not supply oxygen, it must be worn in environments containing adequate concentrations of oxygen (19.5% oxygen).

The user should leave contaminated environment immediately if:

- 1. Breathing becomes difficult.
- 2. Dizziness or other distress occurs.
- 3. You taste or smell the contaminant.

Never alter or modify your respirator. If your respirator needs modification, leave that to the manufacturer. Any alterations to the respirator can reduce its effectiveness, thus putting the wearer in danger.

Due to the dangers that respirators pose to the wearer, only individuals examined and approved by a physician and successfully fit tested should wear respirators. Respirators that have not been fit tested can endanger the wearer by allowing contaminated air to enter the breathing space through points where the face does not seal to the face piece.

Pesticide applicators using pesticides that require respiratory protection must use a cartridge approved for organic vapor removal plus a prefilter approved for pesticides.

There are five inspection points that should be checked before donning the respirator.

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**Headbands:** Check to see that the headbands still have their elasticity. Inspect for breaks or tears in the material and make sure all clips, fasteners and adjusters are in place and working properly.

**Facepiece:** Check facepiece for dirt, cracks, tears or holes. Inspect the shape of the facepiece for possible distortion that may occur from improper storage and make sure the rubber is flexible, not stiff. Also check aluminum yoke for cracks.

**Inhalation and exhalation valves:** Check for cracks, tears, distortion, dirt or build-up of material between valve and valve seat.

**Cartridge holders:** Check to make sure gaskets are in place and check for cracks and damage to threads.

**Cartridges and filters:** Make sure cartridges and filters are clean. Never try to clean a filter or cartridge by washing it or using compressed air. Inspect cartridges for dents, scratches or other damage, particularly metal sealing bead around the bottom.

Fill out an Inspection Record after each inspection. This record requires date of inspection, any findings and signature.

### Assembling the Respirator

Thread cartridges into receptacles carefully. Hand tighten to prevent damage to threads. to insure a good seal against the gaskets, tighten each cartridge by gripping as much of the circumference of the receptacle as possible and then slowly turning the cartridge until tight. Insert the appropriate filter into the appropriate filter cover. Never load filters into the receptacle. Snap filter covers on to both receptacles or cartridges taking care not to damage filters.

### **Fitting the Respirator**

Fit facepiece on nose bridge making sure that you are able to breath through nose. Then swing bottom of facepiece into contact with the chin.

When using elastic or rubber headbands, position headbands with longest straps above the ears and over the crown of the head. Position the headbands with the shortest straps below the ears and around the nape of the neck.

Adjust the straps for a comfortable fit by moving the adjustment slides to lengthen or shorten straps. Adjust the straps just snug enough so that no air leaks around the facepiece. It is not necessary to pull the straps so tight that the respirator digs into the face.

### **Test for Tightness**

Test respirator for leakage using a positive pressure method. Lightly place palm over exhalation valve cover. Gently exhale. A slight postive pressure should build up inside the respirator. If any leakage is detected around the facial seal, readjust the head harness straps and repeat test until there is no leakage. If other than facial seal leakage is detected, the condition must be investigated and correct-

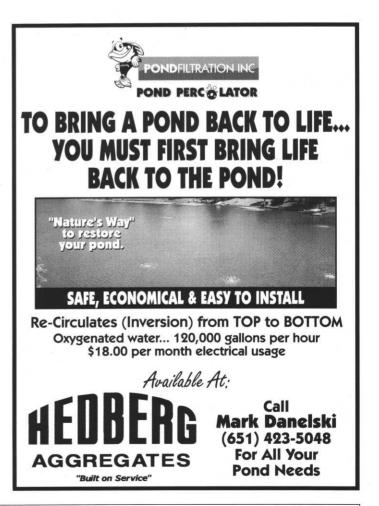
ed before another test is made.

A negative pressure test may also be performed. Lightly place palms over cartridges or filter holders. Gently inhale and the facepiece should collapse against the face. The respirator must pass the tightness tests each time before the respirator is used. The respirator will not furnish protection unless all inhaled air is drawn through suitable cartridges or filters.

### **Cleaning the Respirator**

Make a solution of mild soap and water or cleaner sanitizer designed for respirators. Never use alcohol on respirators because it dries the rubber. Immerse respirator in the solution and scrub gently with a soft brush until clean. Take care to clean the exhalation valve in the facepiece and all other parts that exhaled air contacts. Rinse in plain warm water (about 120 degrees). Allow respirator to air dry. Never use heat lamps, heaters or allow to sun dry. This can distort the shape of the respirator. Clean the respirator after very use!

Store the clean, dry respirator in a large, zip-lock plastic bag. Hang the bag rather than allowing the respirator to contact a surface that can change the shape of the respirator. Also, protect the respirator against dust, sunlight, heat, extreme cold, excessive moisture and damaging chemicals. (Continued on Page 11)



### Respiratory Protection Standard- including putting it on and removing it.

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### Maintenance

Respirators must be kept in good condition to function properly. When any part shows evidence of excessive wear or failure, it should be replaced immediately with the proper part.

#### Inspection

Inspection of headbands, facepiece, inhalation and exhalation valves, cartridge holders and cartridges and/or filters

as discussed earlier must be completed before and after each use. For emergency respirators, respirators must be inspected before and after each use and monthly.

Replace cartridges and filters at the first indication of odor, taste or irritation, when the respirator manufacturer or pesticide label requires, at the end of each work period.

Respirator cartridges don't stop absorbing air contaminants when you take the respirator off. They continue to absorb the contaminants as long as there is any exposure.

Replace cartridges and filters at the first indication of odor, taste or irritation, when the respirator manufacturer or pesticide label requires (if the two have differing instructions, change at the more frequent interval), or at the end of each day's work period, if no other instructions or indications of service life are available.

Obviously, it is much better to change filters and cartridges too often than to change them too seldom.

### Observation

Anyone working with a respirator must have a second person to observe the work activity. In order to prevent respiratorrelated accidents, anyone wearing a respirator will be observed at all times for any signs of exposure or stress.

#### **Typical Sign-Off Sheet for Respirator**

I acknowledge and understand the training I received. The training included:

1. Why the respirator is necessary and how improper fit, usage or maintenance can compromise the protective effect of the respirator.

2. Limitations of respirator use.

3. Selection and use of cartridges and filters.

4. Respirator inspection.

5. Proper use of air purifying respirator,

- 6. Fit test for tightness.
- 7. Cleaning, maintenance and storage of respirator.

8. Medical signs and symptoms that may limit or prevent the effective use of respirators.

9. General requirements of the Respiratory Protection Standard.

10. Chemicals used in this facility that require the use of an air-purifying respirator.

(Editor's Note: This information was gathered from the OSHA manual by Kevin Schmidt, superintendent at The Legacy. Kevin diligently went through the manual and picked out relevant info.)

