

Sample Respirator Training Program

Format The suggested format allows the employer to adapt the training program to the individual requirements of the facility. This may be accomplished in the following ways.

- Where indicated, record the information for your facility, e.g., in what locations of your operations are respirators required, or which chemical exposures necessitate the use of respirators.
- Employees need not be aware of all the different types of respirators, but only the one(s) they will be required to wear.

Training When planning the training session, remember that trainees usually retain only about 20 percent of what they hear, about 40 percent of what they see, and about 70 percent of what they both see and hear. For best results, a program of lectures supplemented by audiovisual materials and demonstrations, is recommended. Some suggestions include:

- Cover material presented in training outline
- Break the lecture at 30-45 minute intervals to allow the employee to stand up and move around
- Use blackboard, chart pad or flip chart for emphasizing subject sequence and major points
- Obtain slides and/or films from your trade association or the equipment manufacturer and intersperse in the presentation
- Illustrate specific areas with personal experiences or examples related to your operation
- Have examples of the respirators used in your facility available in the classroom
- Highlight areas concerned with their operations or requirements
- Supplement the material in this manual by covering company operating procedures and/or instruction material supplied by the equipment manufacturer
- Give employee plenty of time for hands-on practice

Introduction

Opening

An integral part of the program is the free exchange of information, and questions, between employer and employee. Therefore, the following comments should be made at the beginning of the training session.

During this session your full participation is needed.

- If you do not understand what is being discussed, ask questions
- If you have been involved in or are aware of accidents pertaining to specific areas covered, share them with us.
- If you are aware of better approaches to reduce hazardous conditions, give us the benefit of your experience.
- Finally, if there is additional information or guidance we can provide, identify the areas for us.

Describe Goal

Describe the goal of a lesson (task). State what employee will be able to accomplish and how they will be able to use the knowledge. Give a demonstration if appropriate.

Example

Wearing a respirator and wearing it correctly can protect your health. In addition, it is expected as part of your job responsibilities. At the end of this training session, you will be fit tested for your respirator, you will practice donning the respirator, completing face seal checks (***), etc.

Include what you will expect

A. Why is respiratory protective equipment required?

Present Material

1. Occupational Safety & Health Administration (OSHA)

Under OSHA's Respiratory Protection Standard, we are required to develop a written program, properly select respirators, evaluate respirator use, correct deficiencies in respirator use, conduct medical evaluations, provide for the maintenance, storage and cleaning of respirators and retain and provide access to specific records that pertain to you.

OSHA has set maximum exposure standards for any airborne toxic materials and has set standards governing specific working environments to protect your health. A recent evaluation of your working environment revealed that:

Name work areas
List substances

a. In work areas (***) , atmospheric concentrations of substances (***) were found to be above acceptable limits.

Describe activities
Describe exposures

b. Maintenance activities (***) during which you are exposed to (***) This high concentration for a short period of time, can lead to excessive exposure. Results of overexposure are (***) .

Describe areas

c. Several areas (***) were found to be oxygen deficient (give definition)

Name storage areas
Describe emergency situations that could exist in your operation

d. Hazardous substances are stored at (***) and if these substances spill, an emergency condition will exist, or (***) .

2. Status of Engineering Controls

(***) Since the company recognizes that respirator protection is not the accepted method for control of airborne hazards, we are taking steps to implement engineering control solutions.

Plan to have . . .
Describe what
controls are to be/
being implemented

- a. We (***) installed the following engineering controls (***)
- b. And, the following administrative controls (***). However, while the above steps are being implemented, respiratory protection will be required.

Discuss administrative
controls (job rotation;
spreading work
over two shifts, etc.)

B. Respirator Selection and Procedure

Selection procedure of the proper equipment normally involves three steps: the identification of the hazard, the evaluation of the hazard; and finally the selection of the appropriate respiratory equipment based on the first two steps.

1. Identification of the Hazard

Before we get into the “specifics” about the respiratory protective equipment you will be wearing, a few statements about hazard identification.

Discuss only those
contaminant
atmospheres
representing problems

There are several kinds of hazardous atmospheres which may require the use of respirators. (***)

- a. Gaseous Contaminants. Gases are the normal form of substances like carbon dioxide or hydrogen sulfide. These substances are solids or liquids only at very low temperatures or extremely high pressures. Carbon dioxide, for instance, is a gas at room temperature. But it also occurs as solid “dry ice” formed at low temperatures.

Vapors are exactly like gases except that they are formed by the evaporation of substances, such as acetone or trichlorethylene, which ordinarily occur as liquids.

- b. Particulate Contaminants. Particulates are tiny particles, solid or liquid, generated by such processes as grinding, crushing and mixing of a compound, either a solid or a liquid. There are three types of particulates.
 - Dusts are solid particles produced by such processes as grinding, crushing and mixing of powder compounds. Examples are sand and plaster dust. By comparison to the following two types of particulates, dust particles are usually large.
 - Mists are tiny liquid droplets, usually formed whenever a liquid is sprayed, vigorously mixed, or otherwise agitated. Acid mists around diptanks used for metal cleaning and oil mists near newspaper printing presses, are two examples.
 - Fumes are solid condensation particles of extremely small particle size. Fumes are found in the air near soldering, welding and brazing operations, as well as near molten metal processes such as casting and galvanizing.

Two basic forms - gaseous and particulate - frequently occur together. Paint spraying operations, for example, produce both paint mist (particulate) and solvent vapors (gases).

c. Oxygen Deficient Atmospheres (***) . Oxygen deficient atmospheres are most commonly found in confined spaces which have poor ventilation. Examples are silos, petrochemical tanks, degreasers and the holds of ships.

After explaining the type of hazardous atmosphere (a, b or c above) requiring respiratory protection, then discuss the hazard specifics

2. Hazard Specifics (***)

a. Hazard Name - Organic vapor; Particulate; Gas

Check vendor literature & MSDS

b. Toxicity Data (***) .Effects

3. Evaluation of the Hazard (***)

To determine the concentration of the hazard, measurements were made (***) . The concentration and/or work environment examined were compared with the OSHA Standards (***) .

4. Selection of the Respirator

After it was determined that respirators were required, the (***) was consulted to find out the required respiratory protection equipment (***) .

C. Use and Proper Fitting of Respiratory Protective Equipment

1. Use of Respiratory Protective Equipment

Show employee how to put on respirator

2. Proper Fitting

Show various components of respirator functions to remove contaminants

So that respiratory protective devices, which use tight fitting facepieces, give maximum protection, there must be a proper “match” between the facepiece and your face. A poor face seal can respirator, and how cause contaminants to be inhaled through the respirator sealing surfaces, instead of through the filter, canister or air supply system (***) .

Have available at least two different types of respirators for the employee to try on

In most cases, there are several different brands of the same type of respiratory protection equipment approved for use against a specific hazard or work environment. (***)

Use qualitative fit test as a quick test to ascertain proper fit. However, if respirator is used in an extremely hazardous atmosphere,

b. However, just because a respirator “feels comfortable”, it does not mean that it is protecting you to the fullest extent from the hazard. The key word is proper fit. To determine if the fit is proper, several tests can be used. (***)

or for use in emergencies,
use the quantitative
fit

Demonstrate how fit
tests works

D. Limitations of Respiratory Equipment

However, the respiratory protective equipment that you will use does have some limitations on its usage.

Explain
limitations

E. Medical Signs & Symptoms

Examples of medical
conditions, signs,
symptoms that affect
an employee's ability
to use a respirator
can be found in
Appendix C

Some medical problems may prevent you from using some types of respirators or from wearing a respirator under certain workplace conditions. It's important that you are able to recognize these signs or symptoms (e.g., shortness of breath, dizziness). If any should occur, report immediately to (***) so that a follow-up medical evaluation can be started.

F. Maintenance and Storage of Respiratory Equipment

To maintain the proper functioning of respirators requires that they be regularly cleaned and disinfected, and stored in a convenient and clear location.

See Appendix for
cleaning instructions

1. *Cleaning* (***)

Your respiratory protective equipment should be cleaned daily after use. The company has made provisions for doing this. (***)

Discuss provisions
you have made

2. *Storage* (***)

Equipment must be stored properly at the conclusion of the work shift.

Discuss your inspection
procedures

3. *Inspection for Defects* (***)

This is one of the most important functions associated with respirator usage. These inspections can identify damage to malfunctioning respiratory protective equipment.

G. Practice/Checkout - Test

Before using the respirator, the employee must demonstrate he has learned the information. communicated under the training program. You can review the information with the employee, either in writing or orally, and then review (actual demonstration) the employee's hands-on use of respirators.

H. Summary

A summary of those aspects of the proper use of respiratory protective equipment.
Reasons for respiratory protective equipment.

1. *Respirator Selection Procedure* (a. identification of hazard; b. hazard specifics; c. evaluation of the hazard; d. selection of the respirator)
2. *Proper Fitting and Usage* (a. Use; b. Fitting)
3. *Limitations*