

Update

NPMA LIBRARY UPDATE

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The OSHA Respiratory Protection Program Standards

Respirators can protect employees from dangerous air-borne inhalants. A respirator filters air so that the wearer breathes only fresh air that is free of pollutants.

The Department of Labor, Occupational Safety and Health Administration (OSHA), maintains and regularly updates requirements for protection of employees who use respirators. The regulations are found in the Code of Federal Regulations (CFR), Title 29 Part 1910, Subpart I (Personal Protective Equipment), 1910.134, Respiratory Protection. (In addition there are 5 appendices: A, B-1, B-2, C, and D, of which compliance with A, B-1, B-2, and C is mandatory; compliance with appendix D is not mandatory.) The regulations are very complex and lengthy, but may be found at www.osha.gov under Respiratory Protection. Additionally, an e-tool is available to assist in evaluating the proper type of respirator to use; this is found at www.osha.gov/SLTC/etools/respiratory/index.html.

The OSHA respirator standard applies to all occupational airborne exposures to contaminated air where the employee is:

- Exposed to a hazardous level of an airborne contaminant; or
- Required by the employer to wear respirators; or
- Permitted to wear respirators.



Four major duties are imposed by each of these standards. These duties are:

- Where possible, engineer controls to prevent the hazard
- Provide employees with an appropriate respirator
- Ensure the use of an appropriate respirator
- Institute a respiratory protection program that complies with the rest of the standard

The OSHA Respiratory Protection Standard actually states that the use of respirators is the least satisfactory method of exposure control because of the following:

- respirators provide adequate protection only if employers ensure on a constant basis that they are properly fitted and worn.
- respirators protect only the employees who are wearing them from a hazard, rather

Note: This Library Update revises the original 1998 version. The previous edition is no longer valid.

than reducing or eliminating the hazard from the workplace as a whole.

- respirators can be uncomfortable to wear, cumbersome to use, and interfere with communication in the workplace, which can often be critical to safety and health.
- the costs of operating a functional respirator protection program are substantial, and include regular medical examinations, fit testing, training, and the purchasing of equipment.

Of course, engineering workplace safety such that respirators are not required is the preference for OSHA. However, in the pest management business, where we as pest management professionals (PMP's) are entering other people's places of work, we typically have little control over that workplace's safety environment. So, we must protect ourselves with personal protective equipment (PPE) to include respirators if required by the label or company policy.

Who is Covered by the Standard?

All pest management firms that require employees to use a respirator are covered. OSHA has produced an e-tool on their site to assist with compliance.

The Main Points of the Standard

The intent of the standard is to protect employees. This can be accomplished by either improving the breathing atmosphere where employees work or by establishing a respirator program. PMP's require employees to use a respirator when required by the label, regulations, or judgment of the technician.

Whenever respirator use is required, a formal respiratory protection program must be implemented. This includes:

- Assigning of a qualified program administrator to manage and evaluate the program.
- Development and implementation of a written respiratory protection program with procedures specific to the type of business (pest management).

The following sections are a summary of the requirements. The full text of the regulations can be found in the Code of Federal Regulations as referenced above.

- **Qualified Program Administrator:** Each employer must designate a program administrator who is qualified by training or experience to administer the respiratory protection program and to evaluate its effectiveness. The Small Entity Compliance Guide targets small businesses and contains criteria for selection of a program administrator. Copies of the Small Entity Compliance Guide are available from OSHA Office of Publications, Room N 3101, 200 Constitution Ave., NW, Washington, D.C., 20210. (Phone number: 202-219-4667).
- **Development and Implementation of a Written Respiratory Protection Program:** A written respiratory protection program with required worksite-specific procedures and elements for required respirator use must be developed and implemented. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use. The program sets the company policy which must be in compliance with the OSHA requirements.

The program includes procedures for the following activities:

- 1 **Selecting Appropriate Respirators:** All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and used in compliance with the conditions of its certification. Respirators must fit properly and employers must ensure that the employees have access to the proper size of respirators. In general, PMPs performing general pest management work will use Air Purifying Respirators (APRs). For atmospheres which are considered Immediately Dangerous to Life or Health (IDLH), such as fumigated airspaces, Self Contained Breathing Apparatus (SCBA) type equipment must be used. All oxygen deficient areas must be considered IDLH and Air Purifying Respirators (APR) are not permitted. APRs are the typical cartridge type respirators used by the pest management industry. Cartridges, canisters, or filters are required to be changed on a regular schedule maintained by the employer. (Refer to the above-referenced e-tool for both the selection of an appropriate respirator for the respiratory hazard the employee faces, and also for the employer required respirator cartridge change schedule.)

2 Medical Evaluations of Employees Required to Use Respirators: As respirator use may cause physical strain on an employee if the employee has certain medical conditions such as a heart condition or asthma, the employer must provide a medical evaluation to determine the employee's ability to use a respirator. This must be done before fit testing, and must be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire shall be administered in a manner to ensure that the employee understands its content. A physician or other licensed health care professional (PLHCP) must perform the evaluation and the information must be entered in OSHA Appendix C. The PLHCP will request background information such as the type and weight of respirator to be used, duration and frequency of use, expected physical work effort, etc.

A follow-up medical evaluation must be provided for any employee who gives a positive response to any question 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.

3 Fit Testing: Tight-fitting respirators must be fit tested using either OSHA-approved quantitative fit testing (QNFT) or qualitative fit testing (QLFT) protocols; (appendix A of the standard contains these). Fit testing must occur prior to initial use, whenever an employee changes size, make, model or style of respirator face piece, or when an employee reports or employer observes an obvious change in medical condition which could affect the fit of the respirator. Such conditions include, but are not limited to facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight. At the very least, respirators must be fit-tested annually.

Records of fit testing must be maintained until the next fit test and must include at least:

- The name or identification of the employee tested
- The type of fit test performed
- Specific make, model, style, and size of respirator tested
- Date of test
- The pass/fail results for Qualitative Fit Test (QLFT) or the fit factor and strip chart recording or other recording data from the

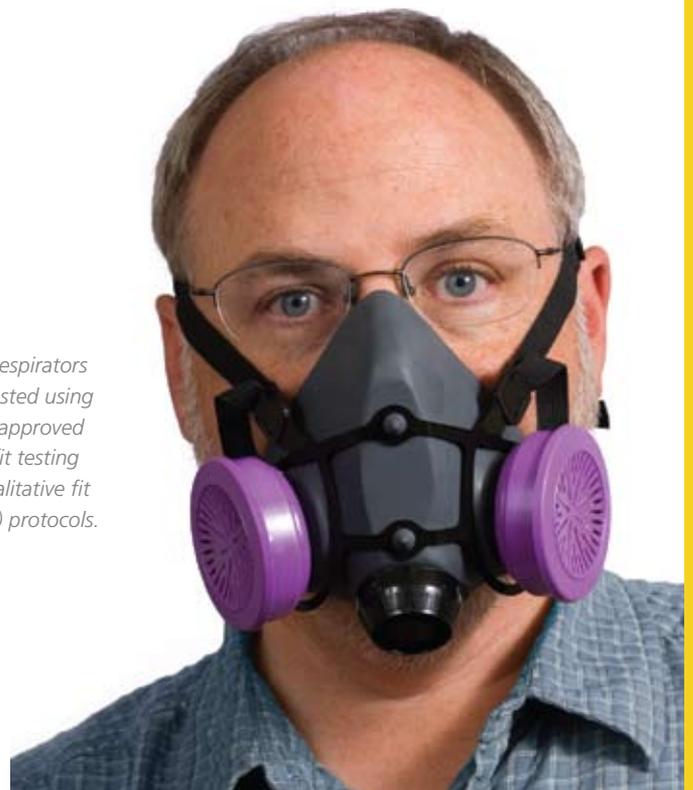
Quantitative Fit Test (QNFT). Fit test records should be retained for respirator users until the next fit test is administered.

For the most common type of respirator in the pest management industry (half-face piece APR), a qualitative type of fit test is appropriate. First, using the methods described in NPMA's *Respiratory Safety* video, available through the Resource Center, the fit is confirmed. Then it is verified using saccharin, banana oil, bitrex, or irritant smoke. Fit test kits are available at pest management supply distributors.

4 Proper Use of Respirators: Employees must understand and implement procedures for the proper use of respirators in both routine jobs and emergencies. Training records must be maintained. The procedures include directions on how to:

- Prevent leaks in the respirator face piece seal by considering facial hair, glasses, dental work, jewelry, personal protective equipment such as bump caps
- Prevent employees from removing respirators in hazardous environments by monitoring employees to ensure that they are properly using the respirator and ensure that respirators operate effectively when needed

Tight-fitting respirators must be fit tested using either OSHA-approved quantitative fit testing (QNFT) or qualitative fit testing (QLFT) protocols.



and throughout an entire work shift

- Protect employees in IDLH atmospheres (generally fumigators) by posting at least two employees outside an IDLH atmosphere
- Protect employees by ensuring that employees perform a user seal check each time they put on a respirator using the procedures provided in the appendix B-1 of the Standard

Employees must be retrained not less than once per year or when the employee changes type of respirator used.

5 **Maintenance and Care of the Respirator:** The respirator must be in good repair and must be cleaned and disinfected and inspected as often as necessary to be maintained in a clean and sanitary condition. (See appendix B-2 of the standard for recommended cleaning and disinfecting procedures.) Respirators must be stored in a manner that prevents damage, such as from sunlight, and keeps dirt and debris from the face piece or valves. Instructions on proper cleaning and disinfection are also provided by manufacturers of the respirators. Respirators must be inspected before each use and during cleaning. Employers must ensure that defective respirators are removed from service and either repaired or discarded. If repaired, they must be repaired using NIOSH-certified parts and standards. In addition to these requirements, all SCBA apparatus must be inspected monthly.

6 **Breathing Air Quality and Use:** This is specific to users of SCBA respirators. The employer is required to provide employees using SCBA with breathing gases of highest purity.

7 **Identification of filters, cartridges, and canisters:** The employer must color code and label (with NIOSH approved labels) all filters, cartridges and canisters used in the workplace. The label cannot be removable and must remain legible.

8 **Training and Information:** This section covers training and retraining requirements for employers to provide employees using respirators. Training must recur annually and prior to the first use of a respirator in the workplace; the training must be comprehensive and understandable in the employee's language. The

employer must also provide the basic information on respirators in appendix D of this section to employees who wear respirators when not required by the employer to do so. The employer will ensure that each employee can demonstrate knowledge of the following points:

- Why a respirator is necessary and how improper fit, usage, or maintenance can compromise its protective effects.
- What the limitations and capabilities of a respirator are.
- How to use the respirator in emergency situations, including if the respirator malfunctions.
- How to inspect, put on, remove, use, and check the seals of the respirator.
- How to properly maintain and store a respirator.
- How to recognize medical signs and symptoms in oneself that may limit or prevent effective use of a respirator.

9 **Program Evaluation:** The program must be regularly evaluated by the employer to ensure that the written respiratory procedures are being followed. The written procedures must include procedures for this program evaluation. The written procedures should have instructions including how often and what methods will be used to evaluate the program. Provisions must be included to ask employees who use respirators to also evaluate the program.

10 **Record Keeping:** This section requires the employer to establish and retain written information regarding medical evaluations, fit testing, and the respirator program. This information will facilitate employee involvement in the respirator program, assist the employer in auditing the adequacy of the program, and provide a record for compliance determinations by OSHA.

For Further Information

This *Library Update* was written in order to provide a brief description of the requirements of the OSHA Respiratory Protection Standard. Prior to implementing the program, employers should obtain and read the full text of the regulations. The full text can be obtained by visiting www.osha.gov under Respiratory Protection, CFR 29, 1910.134.