

Establishing a Respirator Program for Pesticide Use

Respirators are commonly used when handling pesticides, and are often required by the pesticide label, restricted material permit condition, or regulation. To assure that employees using respirators are properly protected, a carefully planned and well executed respiratory protection program must be implemented.

To help you prepare your program we developed these simple guidelines. You may use them as a basis for a program tailored to your company's unique requirements. In addition to these basic guidelines, you should address special requirements such as respirator use during fumigation in confining structures or in emergencies where unusual hazards may be encountered.

RESPONSIBILITIES

Note, this section may vary greatly depending upon the size and organization of your company.

MANAGEMENT is responsible for:

- Determining what specific applications require use of respiratory protective equipment.
- Providing proper respiratory protective equipment to meet the needs of each specific application.
- Ensuring that employees are provided with adequate training and instruction on all equipment used.

SUPERVISORS are responsible for:

- Ensuring the respirators are available as needed.
- Ensuring that employees properly wear respirators where required.
- Providing a clean and secure place for storage of respirators which are issued to their employees.
- Ensuring that their subordinates comply with all facets of this respiratory protection program, including respirator inspection and maintenance.

EMPLOYEES are responsible for:

- Wearing the respirators supplied to them in accordance with instruction and training.
- Cleaning, disinfecting, inspecting and storing their respirators as specified.
- Immediately reporting any observed or suspected respirator malfunction to their supervisor.
- Informing their supervisor of any personal health problems that could be aggravated by the use of respirators.

THE RESPIRATOR PROGRAM COORDINATOR is responsible for administering the overall program. This includes the following elements:

- Contaminant identification and measurement-- includes obtaining technical support for air sampling and laboratory analysis.

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- Selecting and issuing the correct respirators.
- Implementing training programs and providing fit testing for employees who are provided respirators.
- Maintaining all records required by the respiratory protection program.
- Ensuring that employees assigned to tasks requiring use of respirators are physically and psychologically capable of wearing those respirators under the given work conditions.

SELECTING & ISSUING RESPIRATORS

Select only NIOSH/MSHA approved respirators for your program. The choice of respirators for a given work assignment depends on the specific pesticide, the operation to be performed, and the comfort and ease of obtaining a proper fit. The pesticide product label should be consulted first to determine the correct respirator for protection against a specific hazard. For entry into unknown atmospheres or above immediately dangerous to life and health (IDLH) concentrations, atmosphere-supplying respirators such as self contained breathing apparatus (SCBA) should be used.

Respirators, other than those for emergency use, should be used only the employees to whom they have been issued. Each assigned respirator should be identified in a manner that does not interfere with its performance. The date of issuance should be recorded by the respirator program coordinator. Respirators should not be issued until fit testing, training and medical evaluations are completed.

TRAINING EMPLOYEES

Employees should become familiar with the details of your program. Post copies of the program in appropriate locations, keep a copy on file in the main office, and give one to each respirator user.

Train every employee who will use a respirator as well as supervisors and managers. This training should include:

- Description of the respirator.
- The intended use and limitations of the respirator.
- Proper wearing, adjustment and testing for fit.
- Cleaning and storage methods.
- Inspection and maintenance procedures.

This training must be provided prior to initial respirator issuance, repeated as necessary and at least annually to ensure that employees remain familiar with the proper use of their respirators.

RESPIRATOR FIT TESTING

Employees required to wear a respirator must initially be tested for proper fit. The respirator program coordinator should assure that the appropriate respirator fit test is used to determine the ability of each individual respirator user to obtain a satisfactory fit with the respirator prior to issuance. Differences in respirator size, style, make or model can affect the fit.

Prior to each use, the user must check the seal of the respirator face piece (positive and negative pressure checks) to assure proper protection. If the employee is unable to obtain the proper fit with the type of respirator furnished, the company must correct the problem. It is the employee's responsibility to be clean shaven, as any facial hair will prevent a proper fit.

MEDICAL EVALUATION

Employees required to wear a respirator must be physically able to wear the respirator. A physician or other licensed health care professional performs the evaluation either by medical examination or by reviewing the employee's responses to a medical questionnaire. This results in a medical determination of whether the employee can wear a respirator, has medical conditions that prevent him or her from wearing a respirator, or whether there are any limitations on respirator use. The evaluation should be repeated annually.

CARE AND MAINTENANCE

Respirators should be cleaned after each day's use and stored in a clean, secure location to protect against dust, sunlight, extreme temperatures, excessive moisture or damaging chemicals. Respirators must not be hung from nails, hooks, or stored in any manner which might damage or deform them.

Each worker assigned a respirator should be required to maintain it in good condition and to routinely inspect before and after each use and after cleaning. Check the condition of the face piece, head band, valves and hoses; and assure proper fit of the canister, filter or cartridge. Worn or defective parts must be replaced immediately. Respirator repair, other than changing canisters, cartridges, filters and head straps, should be performed by a person certified in the repair of the model of respirator used.

The useful life of a respirator depends on the concentration of the contaminant, conditions of use and the respirator itself. Most pesticide cartridges do not have an end of service life indicator, so the user may not be aware when they are no longer effective. Unless you have specific information from the pesticide label or the respirator manufacturer, it is a good practice to discard all cartridges, filters and filtering facepieces daily.

Individually assigned respirators should be cleaned and disinfected as frequently as necessary to ensure that proper protection is provided for the wearer. The following procedure is used for cleaning and disinfecting respirators:

- Filters, cartridges or canisters are removed before washing the respirator and discarded as necessary.
- Respirators are washed in a detergent solution, sanitized, rinsed in clean water and allowed to dry in a clean area. A soft bristle brush is used to scrub the respirator to remove dirt.

(Specially formulated cleaning/sanitizing compounds are available. Check with the respirator manufacturer.)

EMERGENCY RESPIRATORS

Self-contained breathing apparatus may be required for emergency use. This equipment must be used only by trained personnel. The following points should be considered:

- All potential users must be fully trained in the use of this equipment.
- When the equipment is used, it must be tested in an uncontaminated atmosphere prior to entering the hazardous area.
- An employee must not work alone with such an apparatus in a hazardous atmosphere. At least one additional employee, suitably equipped with a similar breathing apparatus, must be in contact with the first employee and must be available to assist if necessary.
- This equipment must be inspected monthly by trained personnel. Inspection and maintenance information should be noted in a log book, and a record kept with the respirator.

RECORD KEEPING

The following records should be maintained by the respirator program coordinator:

- A record for each respirator issued to an employee (including fit testing).
- A record of employee training programs.
- Inspection and maintenance reports.
- Medical certification that each employee is capable of wearing a respirator under his/her given work conditions.

SPECIAL CONDITIONS

- **Facial hair:** Facial hair that lies along the sealing area of the respirator, such as beards, sideburns, mustaches or even a few days' growth of stubble, is not permitted on employees who are required to wear respirators that rely on a tight face piece fit to achieve maximum protection.
- **Eye glasses:** Ordinary eye glasses should not be used with full-face piece respirators. Eye glasses with temple bars or straps that pass between the sealing surface of a full face piece and the worker's face will prevent a good seal, and should not be used. Special corrective lenses can be mounted inside a full-face piece respirator and are available from all manufacturers of full-face piece respirators.
- **Facial features:** Facial features, such as scars, deep skin creases, prominent cheek bones, severe acne and the lack of teeth or dentures can prevent a respirator from sealing properly.
- **Communications:** Talking while wearing a respirator equipped with a face piece may break the seal of the face piece. When communication is necessary within a contaminated area, it should be done with the help of special communicating equipment obtained from the manufacturer of the respirator.

program varies based on the exposure and type of respirator used. Zenith's Risk Management Bulletin #128, Voluntary Respirator Use provides additional detail.

For further information and assistance, contact your Zenith Safety & Health Consultant.

RESPIRATOR PROGRAM EVALUATION

You should continually review the effectiveness of your respiratory protection program. Frequent, unscheduled observations of employee activities can be made to confirm the proper use of respirators. Hold discussions with supervisors and employees during scheduled meetings. Evaluate the training program at least annually to determine its continued effectiveness.

VOLUNTARY RESPIRATOR USE

In some cases, an employer may allow employees to use respirators in situations where they are not required. In these situations, a limited respiratory protection program is needed to address the risks posed by the respirator itself. The content of the

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