Waiting to Exhale

Golf Course Managers Have Until July to Prepare for a New Respirator Standard

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Conscientious golf course superintendents recognize that good health and safety planning includes a respirator program that protects the maintenance staff against airborne contaminants encountered during chemical spraying, grinding/sanding and other general maintenance activities.

Recently there have been important changes that affect how respirators are selected and used. In July 1995, the National Institute for Occupational Safety and Health (NIOSH), which is the federal government agency responsible for evaluating and certifying respirators and filters. These respirators are widely used for worker protection against hazardous particulates generated during operations such as sanding, grinding and spraying pecticides.

NIOSH updated its testing standard because the existing standard was more than 20 years old and because many workplace hazards exist today that previously hadn't been identified. In addition, NIOSH recognized that filter technologies, as well as measurement methods, have improved during the last two decades.

Implementation of the new certification, known as NIOSH 42 CFR Part 84, requires those responsible for managing respirator programs to reevaluate the process of respirator filter selection and plan for a transition to the new respirators.

New Standards, New Filters

The new NIOSH standard creates three new classifications of filters: N-, R- and P-Series. Each of these new series of filters has three levels of filtering efficiency — 95 percent, 99 percent and 99.97 percent — for a total of nine new classes of respirator filters. This new certification requirement is significant because it eliminates classification of respirator filters by hazard type (such as dust, mist, pesticides, etc.).

One of the major differences under the new standard is filter selection based on the presence of oil aerosols in the work environment. For example, oil aerosols can be found in machine shop lathe or machining operations in which oil is used as a lubricant or to dissipate heat, or during the application of pesticides. The three categories of resistance to oil aerosols are:

- "N" for **Not** resistant to oil.
- "R" for **Resistant** to oil.
- "P" for oil **Proof**.

For most golf course maintenance applications, the conservative selection is a P95 respirator because it offers protection against common particulates (dusts, mists) whether oil is present or not. Respirators and filters approved under the old standard will no longer be available after July 10, 1998.

Respirators approved under 42 CFR 84 must meet increased filter efficiency criteria. Manufacturers can meet these criteria by adding additional layers of filter material to existing respirators. But this approach may make respirators less comfortable and reduce worker acceptance to wearing them, especially as the filter material starts to "load" with airborne contaminants, thereby further increasing breathing resistance.

A better solution is to make significant improvements in the filter media. New filters now on the market are made with an advanced electret media (AEM). These have a permanently imbedded electrostatic charge, which requires less filter material to achieve the same filtering efficency as a purely mechanical filter. The result is easier breathing, greater worker comfort and higher worker acceptance.

Between now and July 1998, golf course managers have time to prepare for the changeover to the new respirators or filters by analyzing current respirator use, reevaluating respirator selection, determining which of the new filters will meet their needs and completing any training required. This transition process can be separated into four steps: workplace assessment, worker-needs evaluation, implementation and respirator program enhancements.

Workplace Assessment

To manage an orderly transition, golf course managers must analyze their current respirator applications, determine which of the new filters will meet their needs and complete any training required to use the new filters.

The first step is to prepare a list of job duties for which respirators will be needed. Start by asking yourself these questions:

- What are the workplace applications (pesticide spraying or sanding, for example)?

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• What is the concentration level of the airborne contaminants?

• What are the workplace conditions — working outside or in a maintenance shop?

• Does the contaminant contain oil? Many pesticides and herbicides contain oil as a stabilizer or transport medium. Do your workers use oils for cleaning or lubrication in any repair operations? If so, you'll have to select a respirator with an R or P filter. Using R or P Series filters is also the most conservative approach.

• Are workers engaged in activities in which they are exposed to high heat and humidity — so that respirator comfort is especially important?

• Do you have the facilities to clean and maintain respirators, or would use of a maintenance-free respirator be easier and more convenient?

Although this process may seem daunting, the good news is that some of the new respirators will be configured specifically for use in particulate and gas and vapor environments — such as pesticide spraying. Models will be available that have easy-to-use combinations of chemical cartridges and particulate prefilters, so there will be no assembly required.

Worker-Needs Evaluation

Next you'll want to evaluate the unique respirator needs of your work force. Here are some questions to consider:

• How many types of respirators are currently in use?

• Is consolidating the number of respirator types important to you?

• Is respirator comfort important to your workers?

• What other protective gear are workers wearing that should be compatible with respirators?

• Are there any concerns about how the respirator program is organized or administered?

Obtain samples of respirators that have been selected, schedule fit-testing if required, and try the respirators in the workplace. Determine how workers react, how long the respirators or filters will last and whether there are any durability issues or other concerns. Choose the specific respirators you plan to use.

Implementation

Employers or green committees may ask golf course managers questions such as, "What is being done to ensure that we are in compliance?" and "Who is responsible for implementing and enforcing respiratory protection requirements?"

Employers should understand the rationale behind the new selection criteria and know which respirators are required for which applications. Although most maintenance workers probably won't be concerned about changes in terminology, such as "filter classification" and "efficiency," they should understand why you are introducing these new respirators and the rationale used to select them.

In some cases, additional respirator training and fit-testing may be required, so workers should understand the need for those activities. You should also explain that some of the new respirators have additional comfort features to help ensure worker acceptance. Communication of these changes can help minimize disruption, ensure continued productivity and promote good health and safety practices.

Respiratory Program Enhancements

As a result of the new NIOSH standard, changes to respirator programs may be necessary. The transition to the new respirators can be used as an opportunity to reevaluate all aspects of your program. This will allow you to ensure that your program is current and that you have the best respirator protection available for your particular applications. For golf courses that have hired new workers, or those whose respirator programs simply haven't been updated for some time — now is a good time to address these issues.

A Smooth Transition

The transition to respirators approved under 42 CFR 84 may initially appear confusing, but it's actually not complicated. There are three essential steps to making a smooth transition: follow good industrial hygiene practices in evaluating workplace contaminants, match the proper respirator to the task and the worker and consider respirator fit and worker comfort to ensure respirator program compliance.

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