



HEALTH & SAFETY NEWSLETTER



PLAINTIFF'S EXHIBIT

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>>> SPECIAL EDITION <<< >>> SPECIAL EDITION <<<

SANDBLASTING WITHOUT THE SAND

During the week of August 9, 1992, a series of articles on silicosis were published in the Houston Chronicle. Silicosis is a fibrosis, or scarring, of the lung tissue that can lead to reduced lung function and ultimately death. The disease is associated with chronic exposure to crystalline silica.

Sandblasting using sand as an abrasive is a source of potential exposure to crystalline silica. At DPMC, programs have been implemented to reduce the potential for exposure to crystalline silica. These programs include substitution to less hazardous abrasives, personal exposure monitoring, personal protective equipment, and medical surveillance.

Sand was used at DPMC as an abrasive until the late 1970's. Today, use of abrasives that do not contain sand is standard practice at the Sand Yard and throughout the Complex. Substitution began in the mid-1970's when we evaluated alternative abrasives.

The alternative abrasives are generally slags composed of amorphous (glass-like) mixtures of metal silicates or oxides. They may contain small amounts of crystalline silica, on the order of 1% or less. Therefore, the health hazards and risks are far less than those from sand. The most common abrasive in use at DPMC is coal-fired boiler slag.

Personal exposure monitoring of workers during sandblasting began in the mid-1970's. The results of this early exposure monitoring lead to the use of better quality respirators and substitution to less hazardous abrasives. After substitution, periodic monitoring has continued in order to assure workers involved in sandblasting activities are appropriately protected.

Even while using less hazardous abrasives, respirators remain an important element of personal protection. Although the hazards have been greatly reduced, the level of airborne dust still requires the sandblaster to wear an air-supplied respirator with blasting hood. Workers in the vicinity may also need respirators, depending on their work and their proximity to the blasting activities.

Finally, Shell Oil Company has established a medical surveillance program for those employees with potential exposure to crystalline silica. Entrance criteria for the program is assignment to a job in which potential exposure to airborne crystalline silica is at or above one half the OSHA permissible exposure limit for 30 or more days in a year. Persons with documented silica-related disease are also eligible for the program.

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