
The Campaign to End Silicosis

by Frank Kane



Agriculture is one of the industries that poses the

If It's Silica, It's Not Just Dust—those are the watchwords for a national public education campaign to prevent silicosis—a disabling, sometimes fatal, lung disease caused by workers' overexposure to silica dust.

In the forefront of the campaign has been the Occupational Safety and Health Administration (OSHA), along with the Mine Safety and Health Administration (MSHA), the National Institute for Occupational Safety and Health (NIOSH), and the American Lung Association.

OSHA preceded the educational effort with a special emphasis program on preventing workers' overexposure to crystalline silica that was announced May 8, 1996. The OSHA program, which included outreach efforts to encourage voluntary protection as a prelude to enforcement, has been unique in that (1) it cuts across industry lines and includes the general industry, construction, and maritime sectors, and (2) it has been dependent on close cooperation with NIOSH and MSHA.

Reports of workers dying from silicosis, caused by inhaling the silica dust, date back to ancient Greece. During the 1930s, public attention in the U.S. focused on the problem because of numerous worker deaths attributed to the "Hawk's Nest" incident. As part of a hydroelectric project, workers had been drilling a tunnel through rock in the Hawk's Nest area near Gauley Bridge, WV, that contained a high amount of silica. Estimates of associated deaths ranged from a company count of 66 to a researcher's count of more than 700.

In 1937, Secretary of Labor Frances Perkins declared war on silicosis, toured mines, convened national conferences on the problem, and issued a film entitled, "Stop Silicosis." In later years, OSHA and MSHA adopted rules limiting silica dust exposures. But the completely preventable occupational disease continued to claim

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greatest potential risk for worker exposure to silica dust.

casualties, killing more than 250 American workers annually and disabling countless others.

In 1994, OSHA launched a process to determine which safety and health hazards in the U.S. needed most attention. A priority planning committee included safety and health experts from OSHA, NIOSH, and MSHA. The committee reviewed available information on occupational deaths, injuries and illnesses, and held an extensive dialogue with representatives of labor, industry, professional and academic organizations, the states, and voluntary standards organizations and the public. The National Advisory Committee on Occupational Safety and Health and the Advisory Committee on Construction Safety and Health also made recommendations.

The committee looked at more than 125 hazards and, in December 1995, identified 18 as safety and health pri-

orities in need of either regulatory or nonregulatory action. Crystalline silica was one of five chosen for rulemaking.

OSHA and MSHA already had permissible exposure limits for silica, but OSHA said it had evidence that its limit was too high, and worker protection was too low in the absence of a comprehensive standard, which would include provisions for product substitution, engineering controls, respiratory protection, and medical screening and surveillance. The agency believed that a full standard would improve worker protection, ensure adequate prevention programs, and further reduce silica-related diseases.¹

With NIOSH reporting more than a million U.S. workers exposed to crystalline silica and more than 250 worker silica deaths recorded each

year, OSHA launched its special emphasis program. Although there is no cure for silicosis, it is 100 percent preventable if employers, workers, and health professionals work together to reduce exposures.

Outreach efforts began last spring with training in the OSHA Training Institute in Des Plaines, IL, on the hazards of silica, silicosis and its effects, and how silica dust exposures can be prevented. The training, conducted with considerable help from NIOSH and MSHA, is available to both enforcement personnel and representatives of OSHA-funded state consultation programs. OSHA field offices and the consultation programs have received outreach materials as well.

Each OSHA region also conducted its own outreach efforts, with speeches and seminars.

¹ Announcement of the Results of the OSHA Priority Planning Process, December 13, 1996.

Pocket-sized cards describing the symptoms of silicosis, which jobs entail the most severe exposures to silica-containing dust,² and how employees can limit their exposures continue to be made available for general industry and construction employers and workers and the public.³

Enforcement efforts began August 1, 1996, 60 days after launching the outreach efforts aimed at voluntary compliance.

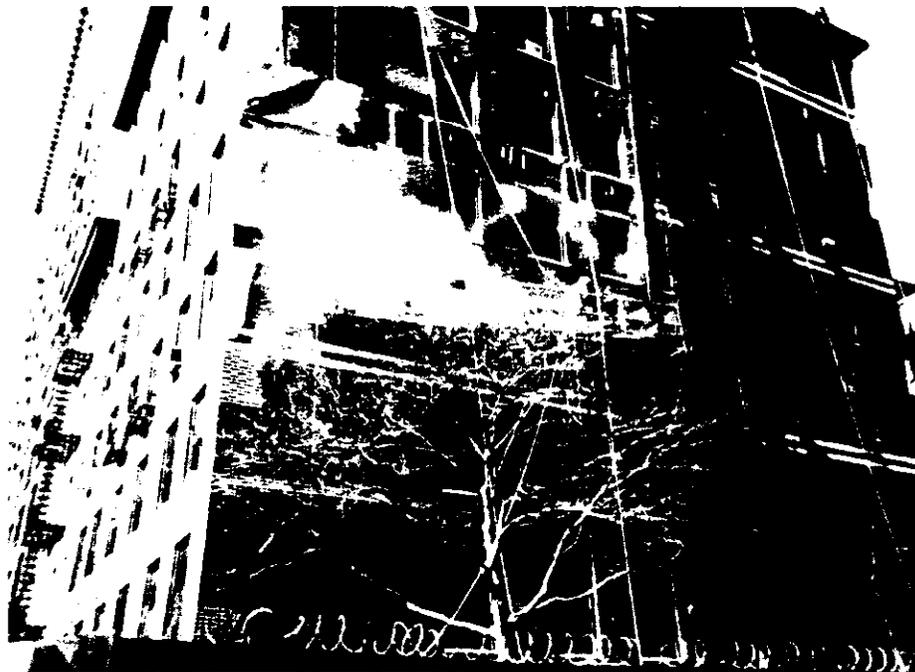
From August 1 to December 31, 1996, OSHA conducted 182 enforcement inspections under the program. Eighty-three were in construction, 78 in general industry, 3 in maritime, and 18 in other types of estab-

lishments. Inspections showed some significant overexposures, mostly in abrasive blasting or construction-related work. In some, worker overexposures were 60 to 80 times the OSHA permissible exposure limit. OSHA compliance personnel have been submitting be-

tween 100 and 150 employee exposure samples per month to the OSHA Laboratory for analysis. About one-third of these have been above the permissible exposure limit. The inspections resulted in issuance of citations for 228 serious violations of OSHA standards relating to silica. The average penalty for a serious violation has been \$892.

In the fall of 1996, Secretary of Labor Robert B. Reich decided to launch a new national education campaign to finish the job of eliminating silicosis that Secretary Perkins had started 60 years earlier.

"We are continuing to make significant progress in fighting this disease," the secretary told



Workers with no protective equipment drill into the brick face of a New York City building increasing their exposure to silica, or stone dust.

² Some of the most severe exposures to silica dust in general industry result from sandblasting, cement manufacturing, asphalt pavement manufacturing, and in the foundry industry. In construction, some of the most severe exposures occur in sandblasting, jack hammer operations, concrete mixing and concrete drilling, railroad track operations, and tunneling. In the maritime industry, severe exposures can occur from abrasive blasting in shipyard operations.

³ OSHA publications are available by calling the OSHA Publications Office at (202) 219-4667.

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a crowded news conference last fall. He added, "...there is no reason at all for any workers to suffer from silicosis. When we get the word out to all workers and employers on how to control silica dust, lives will be saved."

Workers and employers can get a package of free materials by calling the NIOSH toll-free information service (1-800-35-NIOSH). The package contains a tip sheet of ideas for preventing silicosis, a guide for working safely with silica, and stickers for hard hats to remind workers that "if it's silica, it's not just dust."

Staff from OSHA and MSHA will distribute the silica materials

when they inspect mines, construction sites, and other affected industries. NIOSH, as an agency that researches and recommends solutions to workplace hazards, is staffing the 800 number and providing technical information to callers.

Joining Secretary Reich at the news conference were silicosis victims and their families who came to Washington to tell their stories. Others participating and pledging support for the campaign were Margaret Seminario, Director of the AFL-CIO Department of Occupational Safety and Health; officials of two companies committed to preventing silicosis at their worksites, Kevin Crawford, Chair of the National Industrial Sand Association and President and CEO of Unimin Corp., the nation's leading producer of industrial sand; and Donald M. James, President and CEO of Vulcan Materials, the nation's largest producer of construction aggregates; and Alfred Munzer, MD, Past President and Volunteer Spokesperson for the American Lung Association.

Munzer of the lung association noted that silicosis is "an insidious, debilitating lung disease that robs people of their breath and eventually limits their mobility and makes them dependent on supplemental oxygen. Cigarette smoking only aggravates the effects of silica dust and worsens a patient's condition."

The International Agency for Research on Cancer recently determined that crystalline silica is a human carcinogen.

A "National Conference to Eliminate Silicosis," sponsored by OSHA, MSHA, NIOSH, and the American Lung Association, was held March 24-25 in the Renaissance Mayflower Hotel in Washington, DC. For further information, contact Donna Green at MSHA, (703) 235-2525, or on the Internet at <http://www.osha.slc.gov>.

The conference highlighted the best methods of eliminating silicosis. There were problemsolving workshops on how to prevent the disease in specific industries and job operations, plenary sessions with senior government, labor and corporate officials, and opportunities to meet with safety and health professionals who have implemented successful silicosis prevention programs.

Among those invited to speak were Gregory R. Watchman, Acting Assistant Secretary of Labor for



Occupational Safety and Health; J. Davitt McAteer, Assistant Secretary of Labor for Mine Safety and Health; and Dr. Linda Rosenstock, MD, MPH, Director of NIOSH.

As Secretary of Health and Human Services Donna Shalala has said, "This silicosis prevention effort is a partnership that will save lives and significant human and economic costs."

Acting Assistant Secretary Watchman notes, "OSHA has been proud to be in the forefront of the partnership, both with its special emphasis program to limit worker exposure to crystalline silica and its participation in the national educational campaign...by working together with MSHA, NIOSH, the American Lung Association, trade associations, employers, and workers, we can finish the job Frances Perkins began decades ago." JSHQ

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