The OSHA Unified Agenda contains an entry on Occupational Exposure to Crystalline Silica.

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90. OCCUPATIONAL EXPOSURE TO CRYSTALLINE SILICA

Priority: Economically Significant. Major under 5 USC 801.

Unfunded Mandates: Undetermined

Legal Authority: 29 USC 655(b); 29 USC 657

CFR Citation: 29 CFR 1910; 29 CFR 1915; 29 CFR 1917; 29 CFR 1918; 29 CFR 1926

Legal Deadline: None

Abstract: Crystalline silica is a significant component of the earth's crust, and many workers in a wide range of industries are exposed to it, usually in the form of respirable quartz or, less frequently, cristobalite. Chronic silicosis is a uniquely occupational disease resulting from exposure of employees over long periods of time (10 years or more). Exposure to high levels of respirable crystalline silica causes acute or accelerated forms of silicosis that are ultimately fatal. The current OSHA permissible exposure limit (PEL) for general industry is based on a formula recommended by the American Conference of Governmental Industrial Hygienists (ACGIH) in 1971 (PEL=10mg/cubic meter/(% silica + 2), as respirable dust). The current PEL for construction and maritime (derived from ACGIH's 1962 Threshold Limit Value) is based on particle counting technology, which is considered obsolete. NIOSH and ACGIH recommend a 50ug/m3 exposure limit for respirable crystalline silica. Both industry and worker groups have recognized that a comprehensive standard for crystalline silica is needed to provide for exposure monitoring, medical surveillance, and worker training. The American Society for Testing and Materials (ASTM) has published a recommended standard for addressing the hazards of crystalline silica. The Building Construction Trades Department of the AFL-CIO has also developed a recommended comprehensive program standard. These standards include provisions for methods of compliance, exposure monitoring, training, and medical surveillance.

In developing a proposed standard, OSHA is currently considering several options ranging from proposing comprehensive standards simultaneously for general industry, construction, and maritime, to focusing the proposal on one or more specific issues, such as modernizing the construction and maritime PELs or standardizing sampling and analytical methods to ensure that employers and employees are receiving reliable data on employee exposures. OSHA is continuing to coordinate closely with the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) in collecting and developing information for a proposed standard. The Advisory Committee for Construction Safety and Health has also formed a silica working group to assist the Agency in addressing construction-related issues during the development of the proposed rule.

Statement of Need: Over two million workers are exposed to crystalline silica dust in general industry, construction and maritime industries. Industries that could be particularly affected by a standard for crystalline silica include: foundries, industries that have abrasive blasting operations, paint manufacture, glass and concrete product manufacture, brick making, china and pottery manufacture, manufacture of plumbing fixtures, and many

construction activities including highway repair, masonry, concrete work, rock drilling, and tuckpointing. The seriousness of the health hazards associated with silica exposure is demonstrated by the fatalities and disabling illnesses that continue to occur; between 1990 and 1996, 200 to 300 deaths per year are known to have occurred where silicosis was identified on death certificates as an underlying or contributing cause of death. It is likely that many more cases have occurred where silicosis went undetected. In addition, the International Agency for Research on Cancer (IARC) has designated crystalline silica as a known human carcinogen. Exposure to crystalline silica has also been associated with an increased risk of developing tuberculosis and other nonmalignant respiratory diseases, as well as, renal and autoimmune respiratory diseases. Exposure studies and OSHA enforcement data indicate that some workers continue to be exposed to levels of crystalline silica far in excess of current exposure limits. Congress has included compensation of silicosis victims on Federal nuclear testing sites in the Energy Employees' Occupational Illness Compensation Program Act of 2000. There is a particular need for the Agency to modernize its exposure limits for construction and maritime, and to address some specific issues that will need to be resolved to propose a comprehensive standard.

Summary of Legal Basis: The legal basis for the proposed rule is a preliminary determination that workers are exposed to a significant risk of silicosis and other serious disease and that rulemaking is needed to substantially reduce the risk. In addition, the proposed rule will recognize that the PELs for construction and maritime are outdated and need to be revised to reflect current sampling and analytical technologies.

Alternatives: Over the past several years, the Agency has attempted to address this problem through a variety of non-regulatory approaches, including initiation of a Special Emphasis Program on silica in October 1997, sponsorship with NIOSH and MSHA of the National Conference to Eliminate Silicosis, and dissemination of guidance information on its Web site. OSHA has determined that rulemaking is a necessary step to ensure that workers are protected from the hazards of crystalline silica. The Agency is currently evaluating several options for the scope of the rulemaking.

Anticipated Cost and Benefits: The scope of the proposed rulemaking and estimates of the costs and benefits are still under development. Risks: A detailed risk analysis has not yet been completed for this rule.

Timetable:

Action	Date	FR Cite
Complete SBREFA Report	01/00/04	

Regulatory Flexibility Analysis Required: Yes

Government Levels Affected: Undetermined

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