Abstract

Respirable crystalline silica is a serious occupational health hazard. Exposure can result in the development of silicosis, lung cancer, renal disease, and autoimmune disease. Development of silica-related diseases may take 5-40 years, and there is no cure. The U.S. Occupational Safety and Health Administration (OSHA) recognizes the health burden placed on workers exposed to respirable crystalline silica, and has promulgated a regulatory standard that will protect these workers to a greater extent than in the past. The standard mandates that businesses implement exposure monitoring, engineering and work practice controls to reduce exposures, and training and medical surveillance for employees exposed at the action level (AL) for more than 30 days per year. For this project, a brief epidemiological and knowledge assessment of employees was conducted and initial exposure monitoring for workers was performed. Based on the results, recommendations on work practice controls to reduce exposures were made. To comply with the new OSHA standard, a training program for employees was developed, and requirements for medical surveillance were outlined. The results of this work were used to develop a comprehensive Respirable Crystalline Silica Management Plan for the Golden Valley Electric Association power plant located in Healy, Alaska.