

STOP SYAR EXPANSION (SSE)

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Respirable Crystalline Silica (RCS) Dust.

Respirable Crystalline Silica (RCS), a known Type 1 mutagenic carcinogen, is contained in the uncontrolled, toxic dust pollution released from Syar Napa Quarry's mining operations. The prevailing southerly winds carry RCS over schools, pre-schools, businesses, Napa State Hospital, Skyline Wilderness Park, and the large settled residential population north of Imola Ave. (IARC, 1997)

Man-made RCS is similar to finely crushed glass in the size range of bacteria and smaller. The particle size at which silica becomes respirable is 2.5 microns or 2.5 millionths of a meter. By comparison, on average a human hair is 100 microns or 40 times larger than the largest particle of RCS. RCS is invisible to the human eye and has neither taste nor odor.

When inhaled, RCS particles "embed themselves deeply into the tiny alveolar sacs and ducts in the lungs, where oxygen and carbon dioxide gases are exchanged. There, the lungs cannot clear out the dust by mucous or coughing. When the fine particles of silica are deposited in the lungs, macrophages that ingest the dust particles set off an inflammation response by releasing tumor necrosis factors, interleukin-1, leukotriene B4 and other cytokines. In turn, these stimulate fibroblasts to proliferate and produce collagen around the silica particle, thus resulting in fibrosis and the formation of nodular lesions." (Cassel SL, Eisenbarth SC, Iyer SS, et al., June 2008)

With continued exposure, the inhaled particles are accumulative and cannot be expelled. The effects of exposure are irreversible, often disabling, incurable and sometimes fatal. Symptoms can remain sub-clinical even after 10-30 years of occupational exposure. In mortality studies, 100% of workers either died from disease caused by exposure to RCS or from complications related to exposure. All cases showed evidence of reduced lung function caused by RCS. Substantial evidence exists that lung disease can progress for years even after exposure ends. There is no effective treatment. (FedOSHA)