Engineering Controls in Construction

The National Institute for Occupational Safety and Health (NIOSH) has several ongoing research activities focused on the control of hazardous dust and asphalt fumes in the construction industry. These include:

Silica in Construction: Workers may be exposed to hazardous dust containing crystalline silica during construction tasks, including repointing brick; grinding concrete; breaking concrete pavement; milling pavement; drilling holes in concrete and rock; or cutting brick, block, or concrete. NIOSH worked with several partners to identify, develop, and evaluate control measures for these tasks. The controls used either local exhaust ventilation or water sprays to capture or suppress hazardous dust.

Asphalt Paving and Milling: Road construction workers may be exposed to hazardous fumes and dust containing silica during paving or milling processes. NIOSH led an effort along with the National Asphalt Pavement Association, several construction companies, equipment manufacturers, and labor unions to develop and evaluate controls to reduce exposures at road construction sites. This effort eventually led to the installation of engineering control systems on all new paving equipment. NIOSH is also involved in a similar partnership effort to reduce silica exposures during milling processes used to recycle and rebuild asphalt road surfaces.

Partner With Us

To learn more about Engineering Control Construction Research or to become a partner, contact the NIOSH Engineering Controls Program at 513-841-4221 or refer to www.cdc.gov/niosh/topics/engcontrols for more information.

DHHS (NIOSH) Publication No. 2012-176