Local Innovation to Control Silica Dust in Masonry Construction

The power of local action in occupational health: the adoption of local exhaust ventilation in the Chicago tuckpointing trade


Overview

Silica is a pervasive and potentially deadly occupational hazard in construction. The occupational risk posed by silica has long been known, but regulatory action, and adoption of engineering controls in the field, have been slow. This case study describes how local unions, municipal regulators, contractors, and major public construction users played a central role in accelerating adoption of engineering controls in the Chicago area masonry restoration sector, helping protect workers involved in tuckpointing.

Key Findings

- Despite the well-known occupational risk posed by silica exposure, impediments to OSHA rule-making and industry resistance delayed a final rule in construction until 2016.
- In the absence of an updated occupational silica standard, a Special Emphasis Program for silica was used in Chicago to uncover the extreme silica exposure among tuckpointers. This raised awareness of the need for dust capture systems, but this alone was insufficient to change industry practice.
- Adoption of local exhaust ventilation in Chicago became more common as diverse stakeholders, including a specialized local union of tuckpointers, facilitated the adoption of local exhaust ventilation through expanded training supported by joint labor-management trust funds and coordination with contractors.
- Complementing the efforts of the Tuckpointer union, local government efforts and steps by large owners encouraged or mandated adoption of dust control technologies. This included the Chicago Department of Environmental Protection requirement that firms be required to prepare dust control plans as part of the permitting process and the Chicago Public School’s requirement that contractors on school projects must use dust suppression methods.

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