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TITLE: Think AND Act Locally – Promoting Use of Engineering Controls in Construction at the Municipal Level
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ABSTRACT BODY:
Situation/Problem : Masonry restoration work, and specifically tuckpointing, is associated with very high silica exposures. More than half of exposure measurements collected by OSHA during tuckpointing were greater than twice the National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL) for respirable silica (US DOL, 2009). Despite high exposures, engineering controls for tuckpointing are still not often used. Although a proposed OSHA silica standard was published in 2013, a final standard is still pending. Here we examine increased use of local exhaust ventilation (LEV) for tuckpointing in Chicago some 15 years or more before a final standard is likely to be published.
Resolution: We conducted a case study to determine why and how use of LEV became more common for tuckpointing operations in Chicago. Key informants were interviewed, including a former OSHA area director, union leaders, and contractors. In addition, we reviewed archival data including municipal codes, specifications, training materials, articles and presentations describing and analyzing the use of LEV during tuckpointing.
Results: Four groups played key roles in the adoption of LEV in the Chicago: federal OSHA, local government agencies (both regulators and major users of construction services), Tuck Pointers Local 52, and local masonry contractors. They were motivated by concerns for occupational, public and environmental health. Major reasons for use of LEV in Chicago were: 1) concern for worker health among OSHA, local unions and their signatory contractors; 2) increased regulation and enforcement at both the local and federal levels; 3) owners' mandates that required use of LEV; and 4) the need to minimize dust complaints from building occupants and the resulting work stoppages.
Lessons learned: Beyond rule-making, OSHA may serve as an important catalyst in making an industry aware of a hazard and the means to control that hazard. However, local forces, both regulatory and market-based, may in some cases change industry practice more quickly and completely. The joint efforts of building trades unions, contractors and OSHA proved effective in addressing a pervasive hazard such as silica with effective and practical measures. Lessons learned in Chicago may inform efforts in other metropolitan areas where use of LEV for tuckpointing is less common.
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