

Engineering Controls on Highway-Class Asphalt Pavers

Beginning in 1995, asphalt contractors in the U.S., led by the National Asphalt Pavement Association, initiated a partnership with the Federal Highway Administration, the National Institute for Occupational Safety and Health, labor unions, and paver manufacturers to explore strategies for minimizing exposure of the paver operator and screed man to asphalt paving fumes. The industry initiated this very extensive effort despite its conviction that asphalt fumes do not cause long-term health effects. The regulatory process can be quite contentious, often pitting industry against government. Our industry chose cooperation and coordination over confrontation, embracing NIOSH, the unions, and the equipment manufacturers to do something that we could all agree would improve working conditions at the paving site. Rather than expending energy in fighting proposed regulations, we forged ahead to proactively remove fumes from the vicinity of the workers using standard industrial hygiene equipment.

Through this historic partnership, each of the six U.S. manufacturers of highway-class pavers designed and tested engineering control systems using hoods, vents, and fans to vent the fumes away from the workers. Bench tests and then field trials were run. These studies showed that the systems were highly effective. Accordingly, NAPA, the unions, the Occupational Safety and Health Administration, and the paver manufacturers signed an agreement in January 1997. This agreement provided that all highway-class pavers manufactured in the United States after July 1, 1997 would use the control systems.

The "Asphalt Project," as it came to be known at NIOSH, has received tremendous recognition. It was a finalist for the prestigious Innovations in American Government Award program, sponsored by the Ford Foundation and administered by the Kennedy School of Government at Harvard. Also, Asphalt Project received the very first NORA Award (NORA stands for National Occupational Research Agenda) from NIOSH. All of us in the industry are very proud of the fruits borne from this novel partnership.

Several years later, the partnership turned its attention to determining whether the engineering control systems were actually being used by paving crews in the field. Were they indeed effective in venting fumes from the workers? Once again, the participants included NIOSH, NAPA, OSHA, FHWA, labor unions, and the paver manufacturers. In addition, the Association of Equipment Manufacturers, the Asphalt Institute, and the Center to Protect Workers' Rights joined the partnership. After additional testing, it was determined that the control systems are well accepted and well utilized by workers, and that they are effective in reducing occupational exposure to asphalt fumes.

The innovation in this case is the partnering approach, which has probably saved taxpayers millions of dollars. And the big payoff is that the engineering controls were put into place on pavers very quickly, improving conditions at the paving site for thousands of workers.

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