

***Exposure Assessment and Real-time Evaluation of Roadway
Surface Planer Dust Control Technology for Highway
Construction Applications***

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The overall aim of the study is to evaluate existing wet method technology to decrease exposure to respirable dust and crystalline silica for operators of road surface planers. Although dust control technology is available for this application, it is not commonly used in highway construction. The proposed evaluation will include an assessment of exposure to determine the percent silica reduction between wet method technology and standard practice dry methods. The proposed evaluation will also address additional factors that impact the potential for widespread implementation, including an evaluation of productivity, highway construction usability, and worker preference of the wet method technology compared to the current standard practice.

The research objectives of the study will be to 1) determine the percent dust reduction between wet and dry methods over a defined length of asphalt pavement, 2) compare measures of productivity such as the time it takes to mill the defined length of pavement, 3) qualitatively determine the usability of the system for roadway construction (i.e. whether or not water sources are accessible and readily available and whether or not the system is easily transportable), and 4) analyze a questionnaire of worker preference for the dust control method. All of these objectives will compare the wet method technology relative to the traditional dry method.



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