

# Silica/Asphalt Milling Machine Partnership



## **Partnership Time-Line**



- **2002 / 03: NIOSH identifies silica in milling fines and recommends partnering to mitigate**
  - **Partnership loosely based off prior NIOSH partnership to reduce asphalt fumes from pavers**
- **Initial testing (2003) identifies exposure levels slightly below PEL.**
  - **Vested interest in protecting workers**
  - **Recognition that OSHA will revise PEL**
- **2003 – 06: Intermittent field testing with limited progress**

# Milling Machine Partnership Members



**E&B PAVING**.Inc  
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**DYNAPAC**



**VOLVO**



**ROADTEC**

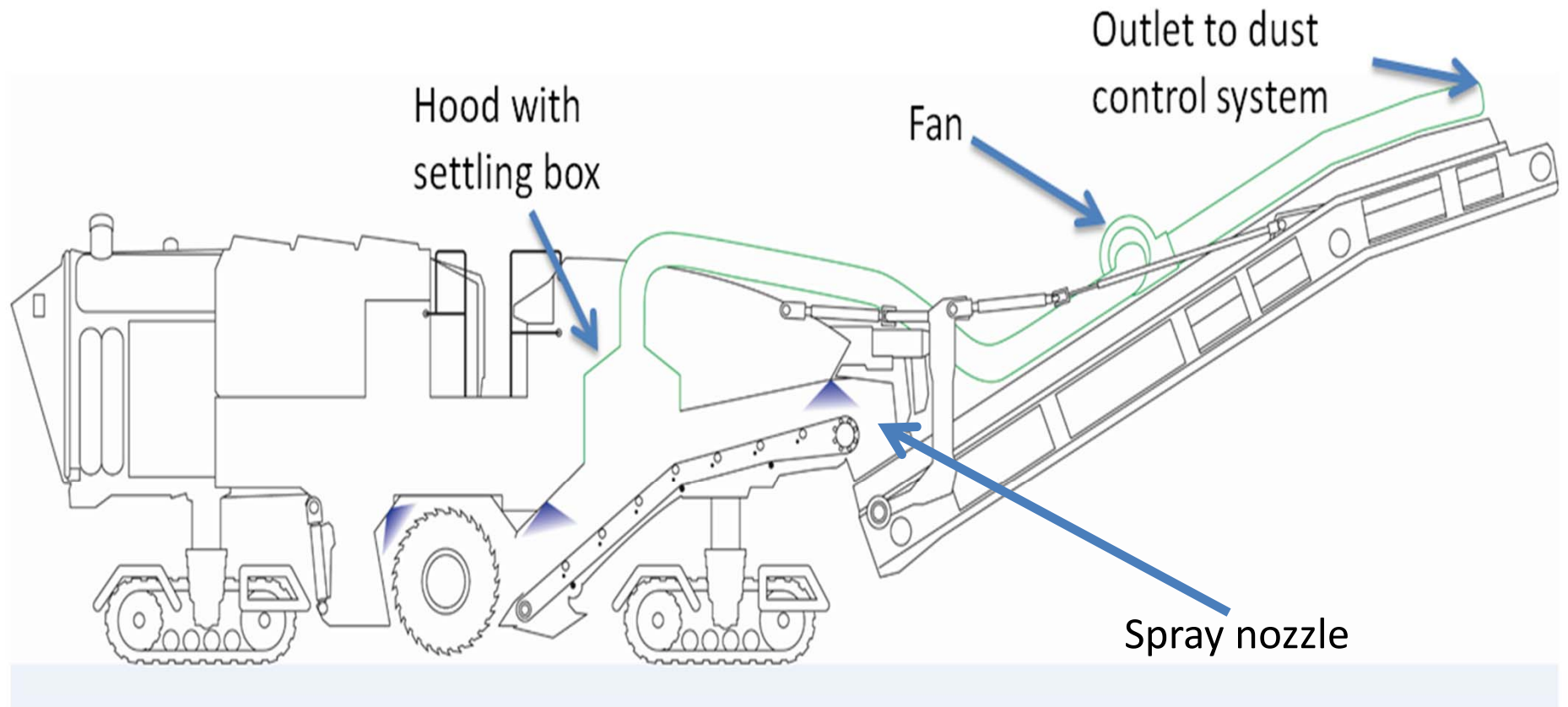
**CATERPILLAR**

## **Partnership Time-Line (continued)**



- **2006 - 10: Large-scale field testing with water spray**
  - **Continued to meet with NIOSH-Cincinnati to understand/increase spray effectiveness**
  - **Tested different spray configurations**
  - **Identified trends in dust = silica reduction**
- **2010 / 11: Identified most effective spray system**
- **2011 – current: Identified that vacuum/evacuation-type systems were quite effective**
  - **Tracer-gas and field testing of combination systems**
- **2013 - 15: OSHA proposes PEL / NIOSH drafts guidance**
  - **CPWR produces “field guide”**

# Diagram of Milling Machine Controls



**Asphalt milling machine with silica dust controls (Illustration by NIOSH)**

# Partnership Guidance Documents



**BEST PRACTICE ENGINEERING CONTROL GUIDELINES TO  
Control Worker Exposure to Respirable Crystalline Silica  
during Asphalt Pavement Milling**



DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health



**FIELD GUIDE**

**for Controlling Silica  
Dust Exposure on  
Asphalt Pavement  
Milling Machines**



# Milling Machine Partnership Take-Aways

- Agency-Labor-Industry Partnerships can be successful
- Stakeholder identification and inclusion is critical
- Stepwise assessment / validation of controls is required
- Consensus guidance released and disseminated
- Voluntary commitment to implement controls
- Partnering in a voluntary, non-regulatory, non-enforcement environment is helpful

