

**NJ Silicosis Outreach and Research Alliance -
Engineering Controls for Crystalline Silica
Modifications to Jackhammer Spray Dust Control by NJ DOT**

**Occupational Health Surveillance Program
Silicosis Surveillance & Intervention Project**



NJ DOT Response to Proposed Engineering Controls

- Adopted jackhammer water-spray control
- Further refined design
- Applied to other equipment:
 - concrete saw
 - 8-lb. chipper
 - compressed-air blowpipe



Representatives from NJ DOT and NJ Turnpike Authority at a demo session for jackhammer water-spray control

NJ DOT Modifications



JACKHAMMER



Without water-spray control



With water-spray control



CONCRETE SAW



Without water-spray control

With water-spray control

8 LB. CHIPPER



Without water-spray control

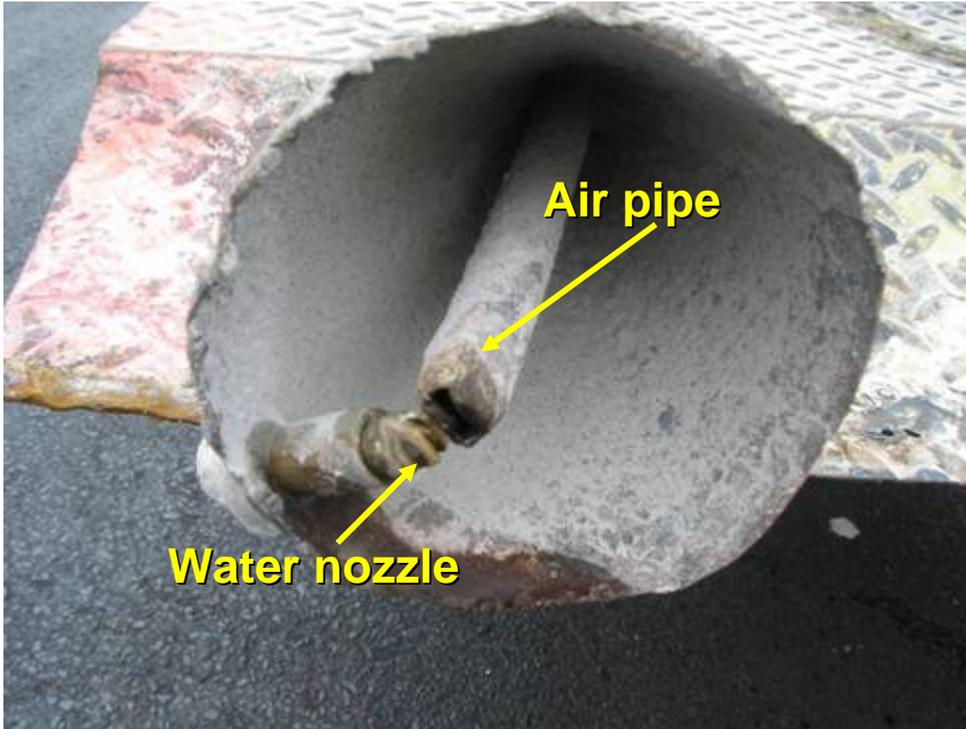
With water-spray control

Compressed-Air Blowpipe

Close-up view of
compressed air pipe with
water-spray attachment



Blowpipe Modification



Conical shield
welded onto pipe



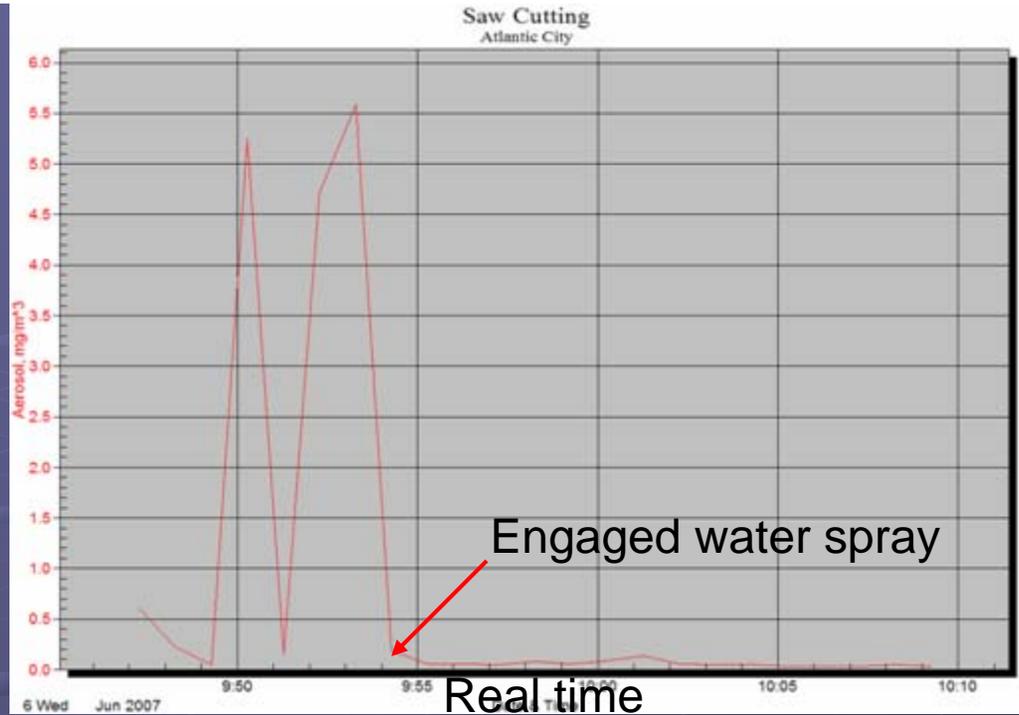
NJ DOT Bridge Repair Atlantic City, NJ



Real-time Air Sampling Results During Dust-Generating Tasks

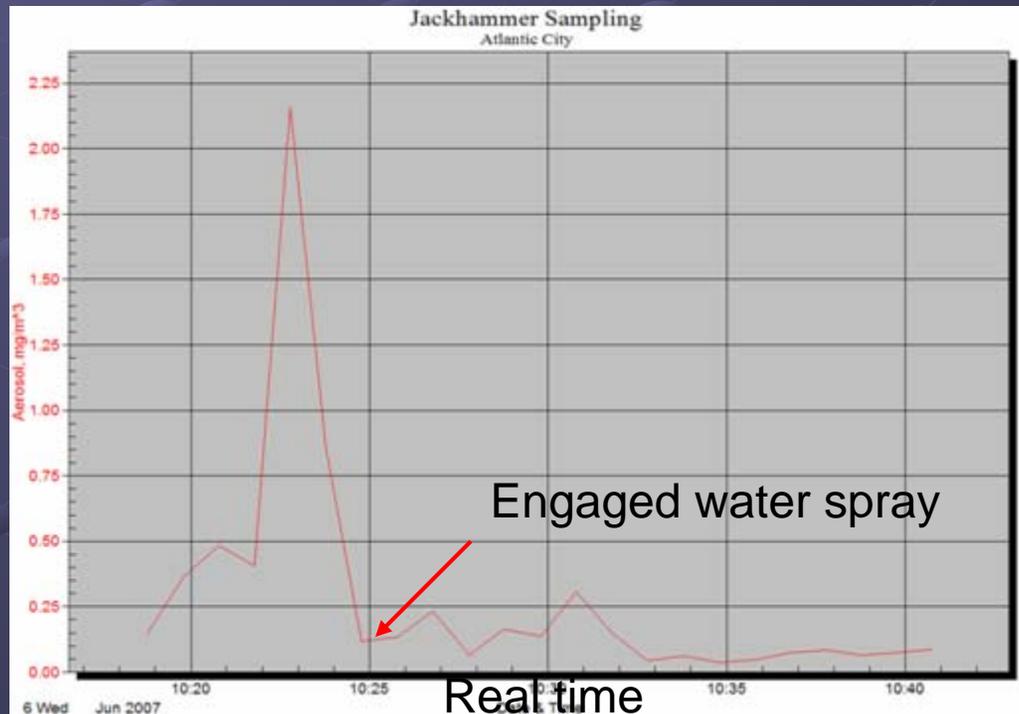
Concrete Saw

Dust concentration



Jackhammer

Dust concentration



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