

Safety Concerns When Using Dry Ice Blasting for Hazardous Materials Remediation

Presented by:

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Dry ice blasting is a relatively new and useful remediation tool. Dry ice blasting can be performed safely. However, without a complete understanding of the hazards associated with dry ice blasting both workers and bystanders can be injured or killed. CSC performed a limited dry ice blasting case study that revealed some important considerations.

Attendees will learn:

- Brief history of dry ice
- Basic properties of dry ice
- Basics principals of media blasting using dry ice
- Benefits associated with dry ice blasting
- Variety of hazards associated with dry ice blasting
- The synergistic hazards associated with dry ice blasting for remediation of hazardous materials (mold, lead based paint, asbestos, etc.)
- Outcome of the 2007 Clark Seif Clark, Inc. (CSC) & Arizona Environmental Group (AEG) case study, which demonstrates key hazards and raises some interesting questions related to:
 - Limitations of available CO₂ monitoring equipment
 - Pockets of positive pressure at the blast site
 - Containment breaching
 - Reductions in air filtration device (AFD) flow rates
 - Large zone of influence downstream of the AFD exhaust

What hazards associated with dry ice blasting must be considered in your jobsite safety plan?

- Hearing loss from both acute and chronic exposures
 - From noise generated by the blast gun
 - From noise generated by the compressor
 - This can be overcome by measuring decibel levels and implementing an appropriate hearing conservation program
- Eye injury
 - From direct impact from careless aiming of the blast nozzle
 - From deflected blast media (dry ice) projectiles
 - From dislodged blast surface material

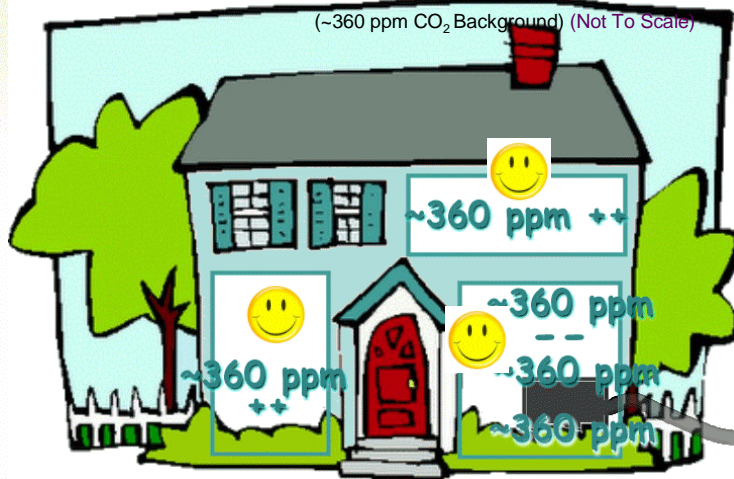


IAQA 11TH ANNUAL MEETING & EXPOSITION

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Prior to Dry Ice Blasting, Point In Time Baseline Measurement

(~360 ppm CO₂ Background) (Not To Scale)



~360 ppm
@ 50 ft

~360 ppm
@ 20 ft

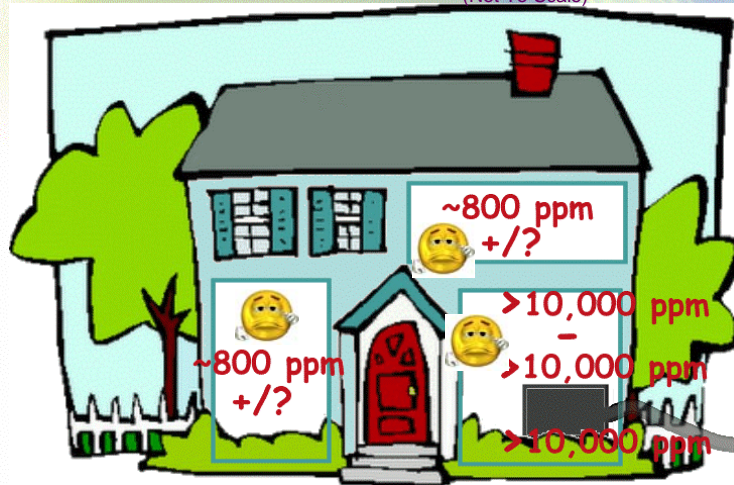


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During Dry Ice Blasting, Point In Time Measurement

(Not To Scale)



~3,500 ppm
@ 50 ft

~7,000 ppm
@ 20 ft

