

**MSHA - Revised
Policies and Procedures for
the
Prevention
of
Coal Dust Explosions**

April 1, 2013

WHY?

- Upper Big Branch Mine Explosion
 - April 5, 2010
 - Massive coal dust explosion
 - 29 miners died, 2 serious injuries
 - Accident investigation and internal review found that MSHA needs to reevaluate sampling procedures to prevent coal mine dust explosions

WHAT DID WE DO?

- Reviewed findings and recommendations of the UBB accident investigation report and internal review
- Consulted with NIOSH
- Reviewed published coal dust/rock dust research
- Reviewed policies and practices of other major coal mining countries
- Revised MSHA policies and procedures to better protect miners from coal dust explosions
- Considering regulatory revisions

WHAT SHOULD MINE OPERATORS DO?

- Comply with existing regulations
- Operators should consistently:
 - Maintain the incombustible content of mine dust
 - Allow no accumulations of float coal dust
 - Develop and maintain an effective clean up program

WHAT WILL MSHA DO DIFFERENTLY?

- More focused oversight of the operator's program
- Revised sample collection methods
- Emphasis on the elimination of float coal dust accumulations
- More thorough quarterly reviews of cleanup programs
- Areas with the highest risk of a coal dust explosion will be targeted by inspectors
- Use of all tools in 30 C.F.R 75, Subpart E to protect miners from the extreme hazards of coal dust explosions

Sample Collection

- Sample locations will be based on the risk of a coal dust explosion
- Sample locations are not limited to advancing sections
- Sampling technique more representative of mine dust that can propagate an explosion
- Where accumulations of float coal dust are likely, samples will be split between floor and roof, ribs and suspended items

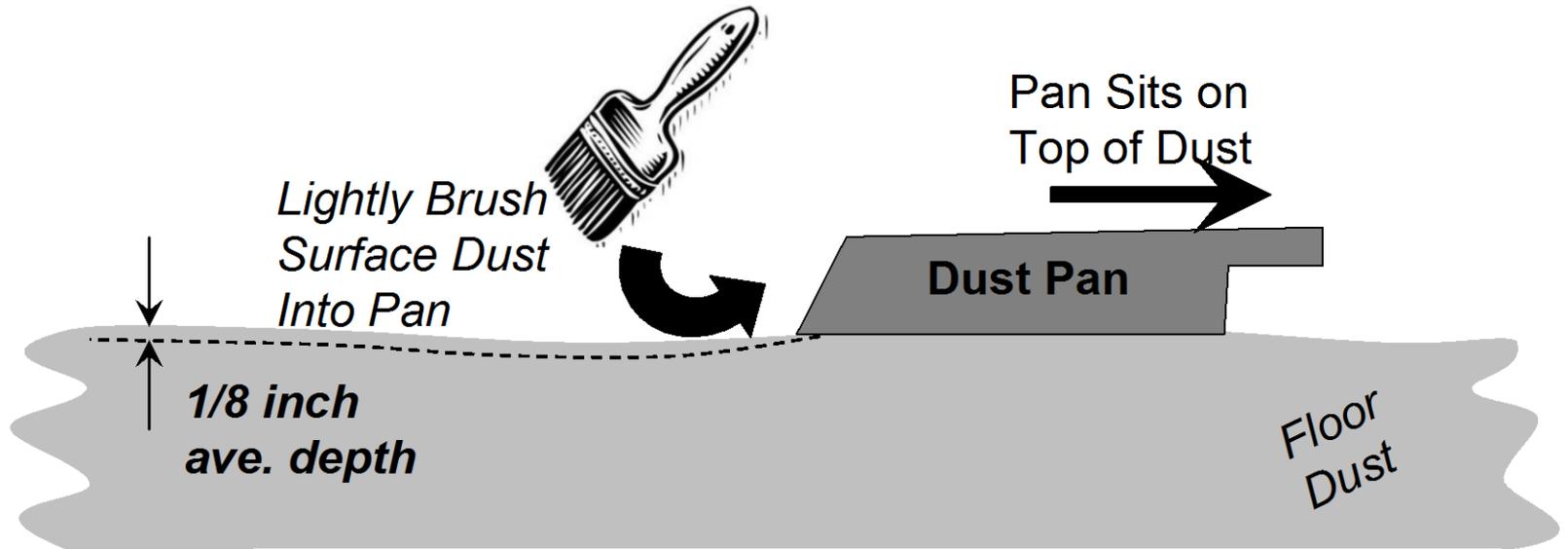
Sample Locations

- Area sample locations instead of survey grid
 - No 10% exclusion
- Both retreating and advancing working sections will be sampled
- Inspectors will choose sample locations visually
- Samples will be collected from entire mine
 - Sample locations will be concentrated in areas where coal dust is generated and where it accumulates (higher risk areas)

Sampling Technique

- Only collect upper layers of floor dust
 - Approximately 1/8th inch depth
- Approximately 6-inch wide band sample around perimeter of entry or crosscut
 - Include dust on suspended items
 - Sample tool on extended handle for roofs, ribs and suspended items that are too high to reach
- Split sample between floor and roof, ribs and suspended items if float coal dust is a factor
- No tracking of wet areas
 - Sample adjacent dry areas
 - For large wet areas, sample roof, ribs and suspended items

Floor Dust Collection



Clean Up Program

- Inspectors will review the operator's clean up program quarterly
- The written clean up program must address:
 - Regular cleanup methods for the removal of accumulations of coal and float coal dusts, loose coal, and other combustibles
 - Active workings, and on
 - Diesel-powered and electrical equipment
 - The methods used for applying rock dust to maintain 80% Total Incombustible Content (TIC) as required by § 75.403
 - The methods to continuously apply rock dust to areas where coal dust is generated and float coal dust accumulates
 - How the mine operator will evaluate the effectiveness of their cleanup program, such as:
 - Review of examination records
 - Rock dust usage
 - Rock dust sampling results
 - Compliance history.
- Mine operators should place emphasis on critical areas such as longwall tailgates, belt transfer points, belt regulators, section returns, and bleeder entries.

Float Coal Dust



One of the greatest potential hazards to underground coal miners

MSHA encourages mine operators to:

- Maintain the required total incombustible content of dust throughout the mine
 - Collect and analyze samples
 - Use CDEM to analyze rock dust
- Eliminate float coal dust accumulations
- Develop a practical clean up program and update it as needed
- Insist that everyone in the coal mine be vigilant against the factors that can propagate coal dust explosions