Other Dust Sources

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What Are “Other Dust Sources”?  

• “Other Dust Sources” are sources of dust from non-production activities  

• Other Dust Sources and the respective controls to be discussed:  
  – Clothing  
  – Travel in the Cage  
  – Mantrip Travel  
  – Haul Road Dust  
  – Feeder Breaker/Dump Point  
  – Conveyor System  
  – Outby Work Activities
Clothing

• Miners’ work activates can soil their clothing. Soiled clothing can become dust sources.

• Controls :
  – Clean uniforms
  – Clothes cleaning booth
  – Training miners to be aware that their clothing can be a dust source
Traveling in the Cage

• Turbulent air created by cage movement generates dust by liberating accumulated fine material into the air. This exposes miners in the cage to dust.

• Control:
  – Keep the cage clean of dust
Mantrip Travel

• Movement of the transporting vehicle, containing miners, generates dust
• Filling sanders can generate dust
• Mantrip seats can blow air when they are being compressed by sitting miners. The blowing air can generate dust.
• The mantrip can travel through dust laden air
• Dust from clothes in the confined area
Man Trip Travel (continued)

• Controls:
  – Keep the mantrip clean
  – Water the mantrip roadway
  – Avoid exposing other miners when filling sanders
    • Design a technique unique to each mine’s fill location
    • Consider ventilation of sand fill area
    • Funnel and spouts for sand to flow through
  – Design mantrip seating so that it does not trap air (i.e. foam instead of cushions)
Haul Road Dust

- Both outby haul roads and face haul roads are dust sources
- Haul road dust is generated from moving vehicles on haul roads
- Controls:
  - Wetting the roadway
  - Using surfactants
  - Speed controls
  - Controlling following distances
  - Controlling travel routes
  - Controlling spillage
  - Smoothing the roadway to avoid bouncing of vehicles
Feeder Breaker/Dump Point

- Feeder breakers have a rotating drum that breaks-up and reduces the size of coal and rock. This breaking action can generate dust.
- Impact from dumping material can generate dust.
- Excessive spillage can be a dust source.
Feeder Breaker/Dump Point
(continued)

• Controls:
  – Water sprays
  – Cleaning spillage
  – Customize dump area to prevent spillage
  – Baffling to minimize impact and air turbulence
  – Adjustments of airflow at feeder to minimize dust concentrations
    • Ventilate to return air or down the belt line away from the face
  – Enclosing the breaker
Conveyor System

• The movement of the belt and idlers can create dust
• Impact of material during loading or unloading of conveyor can create dust
• Controls:
  – Water sprays
  – Baffles
  – Confinement of transfer points – venting to return
  – Control of spillage
  – Impact cradles
  – Dust curtains
  – Ventilate the belt air away from the face
Conveyor System (continued)
Outby Work Activities

• Outby Work Activities are any activities in intake air, upwind of miners
• A number of these activities can generate dust
• Controls:
  – Planning work activities in manner that does not contaminate intake air
Outby Work Activities (continued)

• Several outby work activities create dust:
  – Belt prep work
  – Building stoppings
  – Moving tubing and brattice
  – Scoop activities
  – Delivering supplies to the production crew
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