

Other Dust Sources

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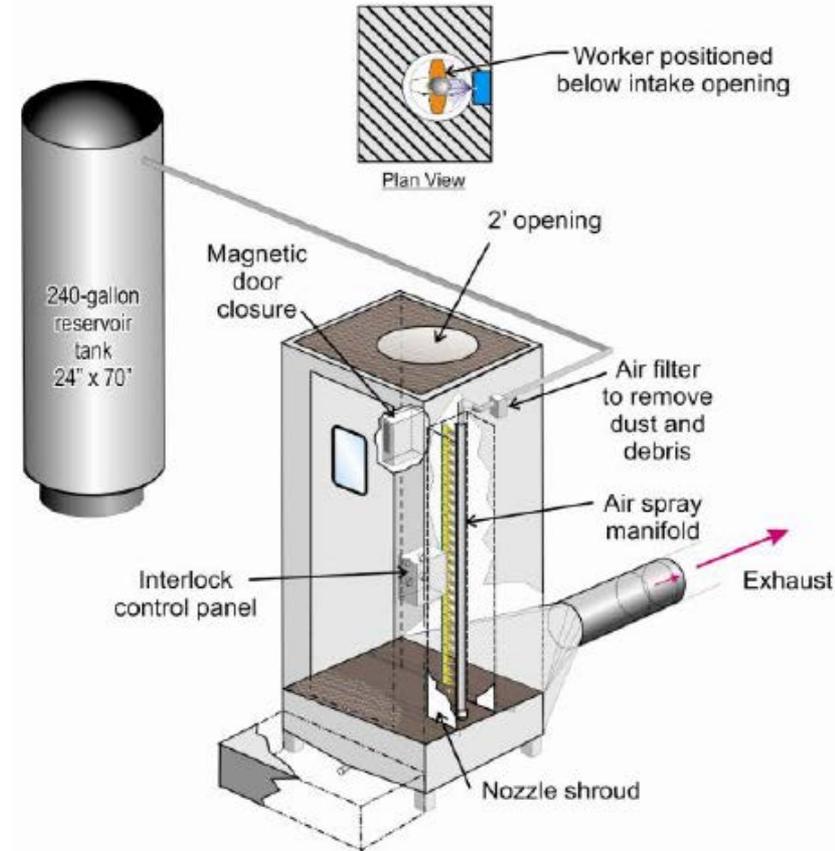
Pittsburgh, PA

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 activities 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)

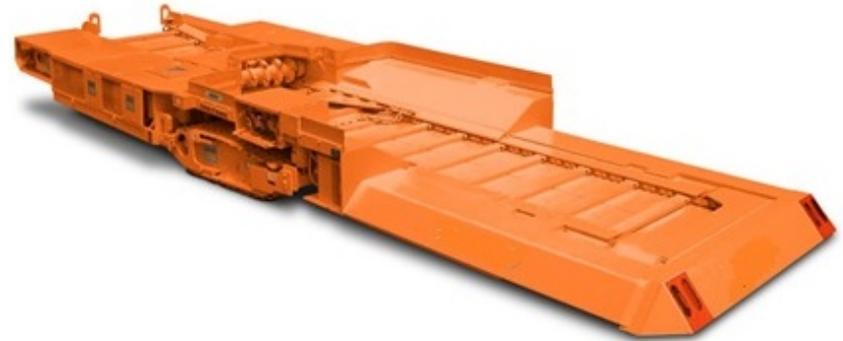
- Controls:
 - Keep the mantrip clean
 - Water the mantrip roadway
 - Avoid exposing other miners when filling sanders
 - Design a technique unique to each mine's fill location
 - Consider ventilation of sand fill area
 - Funnel and spouts for sand to flow through
 - Design mantrip seating so that it 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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