

Attachment D
Controls to Reduce Respirable Dust Exposure
Assessment Worksheet for Workers and Management

Current Controls to Reduce Respirable Dust Exposure: Assessment Worksheet for Workers and Management

Week #: ____ / Date: _____

What **do you/your organization already do** to prevent overexposure to respirable dust? (Check all that you are aware of).

Controlling Respirable Dust on Longwall Mining Operations

Controlling respirable dust on intake roadways

- Limit support activities during production shifts (e.g., delayed vehicle movement, removal of stoppings, and delivering/unloading supplies during production shifts)
- Apply water or hygroscopic compounds to control road haulage dust
- Use surfactants (e.g., soap, detergents to maintain proper moisture in intake roadways)

Controlling respirable dust from the belt entry

- Check belt for maintenance needs
- Wet the coal product during transport
- Scrape and wash belt
- Use a rotary brush to clean the conveying side of the belt
- Wet dry belts

Controlling respirable dust in the headgate entry, including the stageloader/crusher

- Fully enclose the stageloader/crusher
- Wet the coal in the crusher/stageloader area
- Use scrubber technology in the stageloader/crusher area
- Use a high-pressure water-powered scrubber
- Maintain a gob curtain
- Position shearer operators outby as the headgate drum cuts into the headgate entry
- Install a wing or cutout curtain between the panel side rib and the stageloader

Controlling shearer dust

- Modify face ventilation as needed
- Use drum-mounted water sprays
- Maintain cutting drum bits
- Use directional water spray systems
- Keep the headgate splitter arm parallel to the top of the shearer
- Use shearer deflector plates
- Use crescent sprays to provide uniform wetting of the entire cutting zone
- Position a spray manifold at the end of the lump breaker
- Use tailgate-side sprays

Controlling shield dust

- Use a canopy-mounted spray system
- Use shield sprays on the underside of the canopy
- Engage in a unidirectional, rather than bidirectional, cutting sequence

Alternate dust control techniques

- Use ventilated cutting drums
- Use foam discharge from the shearer drum
- Use high-pressure inward-facing drum sprays to confine the dust
- Use a personal respirator or other personal-protective equipment

Controlling Respirable Dust on Continuous Mining Operations

Continuous miner dust control

- Use a water spray system (full cone, flat spray, hollow cone, solid stream, etc.)
- Examine, clean, and/or replace sprays
- Check water filtration system
- Use a cut sequence so cut-throughs could be made from intake to returns
- Use flooded-bed scrubbers to capture dust-laden air from the cutting face
- Maintain the scrubber
- Measure airflow in the scrubber
- Check filter panel thickness
- Use surfactants to increase wettability of dust
- Inspect and/or replace dull, broken, or missing bits
- Modify the cutting method
- Reduce time working downwind of the bolter

Face ventilation dust control

- Position operator in the mouth of the blowing line curtain with intake air sweeping from behind
- Allow the dust-laden air to clear the entry before moving
- Allow the dust-laden air to clear the entry before stopping the scrubber
- Position the machine and then go to the end of the curtain before resuming coal cutting

- Use blowing face ventilation system
- Monitor brattice curtain, keep close to face
- Place scrubber discharge on opposite side of the line brattice
- Reduce air velocity by flaring out the line curtain at the end
- Erect a short line curtain during the slab cut
- Use exhausting ventilation system

Dust control for roof bolters

- Maintain the dust collector system
- Clean the dust box
- Use dust collector bags
- Remove and replace the canister filter
- Clean the discharge side of the collector
- Install a sock on pre-cleaners
- Use “dust hog” bits
- Position to avoid working downwind of continuous miner
- Wet drill/mist drill
- Use canopy air curtain
- Route miner-generated dust to the return

Dust control for intake airways

- Maintain good housekeeping to keep intake entries free of debris, equipment, and supplies
- Perform supply delivery, scoop activity, stopping construction, and rock dusting during nonproduction shifts
- If haulage activities do take place during production shifts, haulage roadways are kept damp
- Equipment is parked in crosscuts

Feeder-breaker and shuttle cars

- Use hollow or full-cone sprays at the feeder-break transfer point
- Use automated sprays at the mouth of the feeder-breaker when shuttle cars unload
- Throat sprays on the continuous miner wet coal when entering the conveyor
- Shuttle cars are never in a waiting position behind check curtains
- Shuttle car operators are not located in the direct discharge of the scrubber on the continuous miner
- Configure shuttle car runs to minimize the amount of time spent in return air

- Other (use box below to record other technique to reduce dust exposure)