

sampling concept which the Agency adopted in 1970.

Under these procedures the sampling device must remain in the environment of the miner who works nearest the return air-side of the longwall working face. However, in certain circumstances, MSHA may not require transfer of the sampling device if the amount of time a particular miner spends inby or downwind of the DO is known to be infrequent and of short duration, limited to 20 minutes or less. However, transfer of the sampling device is required if the same miner travels inby the DO routinely during the shift.

There are other ways to reduce the number of times that a sampling device needs to be transferred from one miner to another during a shift. This depends on the particular mining practices of the operator. By fully utilizing the operational capabilities designed into currently-employed longwall equipment or altering the mining cycle, the need for miners to work routinely inby the shearer can and should be minimized, thereby reducing the number of necessary pump transfers, and the potential for miners to be overexposed to respirable dust. Another approach has been used successfully at longwall MMUs employing a type of water-spray system called "shearer-clearer." This involves limiting the movement of miners to a certain region or distance inby of the shearer. In some instances this distance can reach 40 feet inby if samples indicate dust levels are similar to the levels in the environment of the tailgate-side shearer operator (Occupation code 044).

If a properly designed shearer-clearer system is installed and maintained, it is very effective in confining the shearer-generated dust to the face for some distance downwind of the shearer and prevents migration to the walkway where miners are located. Therefore, miners who are required to spend time inby the shearer can be protected from exposure to excessive dust levels if their work is limited to this particular area. This area, however, is normally established through sampling on a mine-by-mine basis. The area can vary depending on the quantities and velocities of air delivered to the longwall face, type of cut sequence, water flow rates and spray pressures, and tonnage produced.

If any of these approaches are not suitable or if the miner working furthest downwind refuses to wear the sampling device for any reason, the proposed rule provides for the placement of the sampling device in a specified location on the return side within 48 inches of the corner of the longwall face, which

MSHA has designated as the 061 DO. Placing the sampling device at this location is comparable to placing the sampling device on the continuous mining machine within 36 inches inby the normal work position of the machine operator. It should be noted, however, that since dust concentrations at this location are typically the highest, no longwall MMUs are currently submitting bimonthly samples taken at the 061 DO.

The proposed approach, which involves sampling the "high risk occupation," currently referred to as the DO, is not new and has been in use since inception of the mandated sampling program in 1970. This sampling approach is designed to monitor the mine atmosphere with the greatest concentration of respirable dust exposure, in the areas where miners are working during their shift, to prevent excess exposure of miners to respirable coal mine dust. The goal has never been to measure the exposure of an individual miner for the duration of a shift, but rather to determine if the mine atmosphere in the active workings is free of excessive concentrations of respirable dust in order to protect each miner required to work in that environment.

Based on the various dust generating sources and the manner in which the face is ventilated, the return air-side of a longwall face is the area on a longwall MMU with the greatest concentration of respirable dust. Accordingly, since miners are required to work in this area, operators are required to maintain the mine atmosphere in this area or location in compliance with the applicable dust standard on each shift. By doing so, it can be concluded that other miners in less risky occupations are protected from excessive dust concentrations. While these measurements will not show a particular miner's dust exposure, the results will indicate if the air that miners are breathing is in compliance with the applicable dust standard. The objective of the proposed sampling scheme is to control the concentration of respirable dust in the workplace. The method of sampling the DO on a longwall MMU was determined to be reasonable and consistent with the Mine Act in *American Mining Congress v. Marshall*, 671 Fed 12151 (10th Cir. 1982). MSHA believes that the method of sampling being proposed will effectively serve the health protection goal of achieving and maintaining good air quality in each MMU. Therefore, the long-standing practice of sampling the DO in each longwall MMU or any other DO would be continued under the proposed rule.

Since the objective is to verify the adequacy of the dust control parameters in effect at a MMU, proposed paragraph (b) would require sampling devices to be turned "ON" when the production crew arrives at the MMU to be sampled, regardless if any actual mining is taking place, and not at the portal as required in existing § 70.201(b) for bimonthly sampling. The operator would continue to examine each sampling device at least twice during the sampling shift in accordance with proposed § 70.203(b)(1) and (2). Each sampling device would remain operational during the entire shift that the production crew remains in the MMU, regardless of the number of hours worked. The sampling devices would be turned "OFF" at the end of the shift as the production crew, assigned to the occupation(s) being sampled, exits the MMU to travel back to the mine portal.

Each operator would be required to use one control filter for each shift of sampling as required by proposed § 70.201(d). As explained earlier, the control filter will be used to adjust the weight gain obtained on each exposed filter by subtracting any change in the weight of the control filter from the change in weight of each exposed filter. Its use in accordance with § 70.201(d) will enhance the decision-making process involving the approval or denial of the dust control parameters by the district manager.

To qualify as a valid sample for verification purposes, the amount of material produced by the MMU during the shift being sampled must equal or exceed the VPL as required by proposed § 70.201(e). If the VPL is not achieved, the sample(s) will be voided by MSHA. However, any sample that exceeds either verification limit or the applicable dust standard by any amount would be used to determine the equivalent concentration for that occupation, regardless of production.

Proposed § 70.201(e) also requires the operator to utilize only the dust control parameters that were provisionally approved by the district manager. Recognizing that engineering parameters such as air quantity and velocity and water pressure are subject to measurement error and cannot easily be controlled with absolute precision, MSHA would allow the measured levels to be up to 115% of the quantities specified in the plan.

If a measured level exceeds the corresponding quantity specified in the plan by more than 15 percent, the operator would have the option to either (1) adjust the engineering parameter(s) to what is specified in the plan before beginning verification sampling or (2)