

develop regulations for improved fire-resistant belting including new testing and approval schedules. These issues were placed in a separate rulemaking and are not included in this rulemaking package as discussed above.

Existing § 75.351 (Atmospheric monitoring system (AMS) established performance requirements for AMSs used to comply with existing §§ 75.323 (d)(1)(ii)—Return air split alternative, 75.340(a)(1)(ii) and 75.340(a)(2)(ii)—Underground electrical installations, or 75.362(f)—On-shift examination. The proposed rule would revise § 75.351 to include requirements for the installation and operation of an AMS in belt entries. The Advisory Committee concluded that belt air course could be safely used to ventilate working places of underground coal mines, provided additional safety and health conditions are met. One additional condition is the presence within the belt entry of an early-warning fire detection system. This position is consistent with the conclusion of the BEVR Committee that “Directing belt air to the face provides protection equivalent to other ventilation methods which comply with § 75.326 [now § 75.350], provided a carbon monoxide (CO) or other improved monitoring system is used.” It is also consistent with our position since 1978 requiring the use of a low-level CO detection system when we grant a petition to use belt air to ventilate working places.

#### B. Section-by-Section Discussion

##### Part 75—Mandatory Safety Standards—Underground Coal Mines

##### Section 75.301 Definitions.

This proposed rule would add six new definitions to the list of definitions contained in the existing standard. As with other definitions in this section, the new definitions would only apply to subpart D—Ventilation.

The proposed rule would define *appropriate personnel* as the person or persons designated by the operator to perform specific tasks in response to AMS signals under § 75.351.

The proposed rule would define an *atmospheric monitoring system (AMS)* as a network consisting of hardware and software capable of measuring atmospheric parameters, such as carbon monoxide and methane concentrations, and smoke optical density; transmitting the measurements to a designated surface location; providing alert and alarm signals to designated locations; processing and cataloging atmospheric data; and providing reports that can be used in the maintenance and calibration of the system by the mine operator. We

believe that each of these capabilities is important and that an AMS used to comply with the requirements of the standard provides these functions.

The proposed rule would define the *AMS operator* as the person(s) designated by the mine operator and located on the surface of the mine to monitor the AMS signals and to notify appropriate personnel in response to a malfunction, alert, or alarm signal. The Advisory Committee recommended that this person also be responsible for initiating procedures contained in the mine's fire fighting and evacuation plan. During discussions of the duties of the “responsible person,” the Advisory Committee characterized this person as “responsible for monitoring the system and, hence, initiating the Fire Fighting and Evacuation Plan.” Some members of the Advisory Committee noted that this individual was responsible for the safety of the miners in the mine. Other members of the Advisory Committee, as well as testimony by some members of the public, argued that the responsibility for the safety of the miners rests elsewhere and not solely with the person monitoring the AMS on the surface. We believe that, although the AMS operator could be the person designated to initiate the actions of the approved program of instruction (*i.e.*, the mine emergency evacuation and firefighting plan), this rule should not require that person to be the person in charge of implementing the approved program of instruction. Instead, the individual responsible for initiating actions specified in the fire fighting and evacuation plan should be identified in the approved program of instruction (§ 75.1502).

MSHA includes a definition for the *belt air course* in the proposed rule. The belt air course would be defined as containing the entry in which a belt is located and any adjacent entry(ies) not separated from the belt entry by permanent ventilation controls, including any entries in series with the belt air course, terminating at a return regulator, a working section, or the surface. The proposed rule deals with the belt air course and not just the belt entry due to the homogeneity of the airstream within the air course.

The proposed rule would define *carbon monoxide ambient level* as the average concentration in ppm of CO detected in an air course containing CO sensors. This average is representative of the composition of the mine atmosphere over a designated period of mining activity during a non-fire condition. We believe that an effective early-warning fire detection system must be based upon reasonable

operating parameters, which include the evaluation of ambient CO levels.

The definition of ambient level includes the term ‘average concentration.’ The ambient CO levels will vary from mine to mine. For this reason, the ambient level and the method used to determine it, are required to be approved in the mine ventilation plan. Documentation must be provided to the district manager that the specified ambient level requested reflects the true conditions of the atmosphere. For many mines, the average concentration will be the same throughout the air course and will be at or near zero ppm. A mine may choose to designate its ambient level as zero ppm though the average concentration might be above zero ppm. There may be more than one ambient level per mine. We recognize that in some mines, CO occurs naturally as a characteristic of the coal seam and that higher average concentrations will exist. Also, diesel-powered equipment produces CO when operating and thus will raise the average concentration of the CO within the air course. Operation of diesel-powered equipment near a CO sensor might cause ‘spike’ concentrations of CO to occur. In-mine tests have shown that these spikes account for a small part of the sample concentrations. Thus, if the ambient level is determined using a reasonable duration of time, the average will represent the concentration approximating that most often found in the air course.

In order for an AMS with CO sensors to be effective as an early-warning fire detection system, the ambient level must represent conditions over a broad range of mining activities. We recognize that the ambient level may vary from shift to shift depending on the type or amount of work being done. We believe approval of the ambient level and the method used to establish it are most appropriately addressed in the mine ventilation plan due to varying mining conditions and activities. Therefore, MSHA would continue to require that the ambient level and the method for determining the ambient level be specified and approved in the mine ventilation plan, § 75.371(hh).

For clarity, we are proposing a definition for *point feeding*. As defined by the proposed rule, point feeding would be the process of providing additional intake air to the belt air course from another intake air course through a regulator. It is our experience that point feeding from one intake air course to another is an effective tool for controlling the proper pressure differentials between entries. This is a useful tool that limits leakage from one