

outby the working places, unless the cause is known beforehand not to be a hazard. An examination is then made to determine the cause of the activation.

(b) Alarm—When alarm levels are reached, the sensor that is activated is identified and all persons in the same split of air are withdrawn to a safe location outby the sensor activating the alarm, unless the cause is known beforehand not to be a hazard. An examination is then made and if a hazard exists, the mine Fire Fighting and Evacuation Plan is implemented.

(c) During the alert/alarm mode the belt may, at the discretion of the mine operator, continue to operate until the area is examined."

And in Item 7 the Advisory Committee stated:

"In the event of an alert, personnel on the surface, except those necessary to investigate the cause of the alert, should not enter the affected area of the mine unless the cause of the alert is known beforehand not to present a hazard. In the event of an alarm, personnel on the surface, except those persons necessary to investigate the cause of the alarm, should not enter any area of the mine unless the cause of the alarm is known beforehand not to present a hazard."

Actions in response to AMS alert and alarm signals for both underground and surface personnel would be covered by proposed § 75.352. In the event of an alert signal, the sensor activated would be identified and an examination would begin immediately to determine the cause of the alert signal. The Advisory Committee recommended that the section personnel be withdrawn to a safe location outby the working places. MSHA believes that this action is not warranted prior to an examination of the affected sensor. If during the examination of the sensor, a fire hazard is discovered before an alarm level is detected, evacuation should be initiated.

MSHA agrees that alarm activations should necessitate withdrawal of personnel to the sensor outby the sensor in alarm state.

The proposed rule does not address the continuing operation of a belt in the event of alarm activation. While MSHA's experience suggests that belts normally should not be stopped, it is the decision of the mine operator to take whatever actions are needed to protect miners and mine property.

There has been anecdotal evidence to show that combustion of the conveyor belt fabric does not usually occur unless the belt is stopped. Moving conveyor belts, while creating frictional heating, do not normally burn with open flame.

In addition, the proposed rule does not address restrictions on persons entering the mine when either alert or alarm signals occur. MSHA believes that mine operators must be given flexibility

in how they respond to emergencies in order to better protect the miners. We believe any persons entering the mine in an emergency should be only those needed to respond to the emergency, as indicated in the mine's emergency evacuation and firefighting program of instruction, § 75.1502 (formerly referred to under § 75.1101–23—Program of instruction; location and use of fire fighting equipment; location of escapeways, exits and routes of travel; evacuation procedures; fire drills).

Item 8—Avoidance of Nuisance Alarms

The Advisory Committee stated:

"To avoid nuisance alert signals, the District Manager may approve a plan which requires incorporation of reasonable time delays or other techniques (computer/administrative) into the alert/alarm signal system. The Committee determined that experience gained by the Agency during the petition for modification process could be used as a guideline. When a planned activity which may result in CO above the alarm levels being produced, such as cutting, welding, calibration, blasting, major equipment moves requiring the use of diesel equipment, etc., is scheduled, the person in charge of the activity should notify the responsible person at the surface monitoring station of:

- (a) The location and type of activity;
- (b) The time the activity begins; and
- (c) The time the activity is completed.

Anticipated alerts/alarms require notification to sections inby on the same split of air prior to and after planned activities.

A fire check for hot spots is required after cutting and welding is performed. Should hot spots be found, they should be extinguished immediately."

The Advisory Committee report indicated the use of tools to reduce the frequency of alarms due to non-fire conditions could be effective in maintaining the confidence of miners as well as bolstering the importance of alarms. These tools include time delays and other data analyzing techniques which could prevent the "cry-wolf" syndrome, in which alarms are discounted as "just that diesel scoop" or "must be cutting belt structure again." MSHA agrees that these tools may be of value.

Proposed § 75.351(m) allows the use of these tools when a demonstrated need exists, while proposed § 75.371(11) requires the method to be included in the approved mine ventilation plan. Time delays are limited to a maximum of three minutes. MSHA experience indicates that this is normally sufficient to account for non-fire signals.

There is technology available that distinguishes the products of combustion produced by diesel engines and by open flame. MSHA encourages the use of such technology to reduce or

eliminate nuisance alarms and the need for time delays. We also believe operators should explore implementation of future technological advances. As these technologies evolve, MSHA will encourage their implementation through the mine ventilation plan approval process.

Prior to being approved for use, the operator will be expected to demonstrate the need for such a tool, as well as the expected benefit from using the tool. In this case, records indicating the frequency of alert and alarm signals, as well as the duration of the alert and alarm signals will be of value to the operator. The proposed rule meets the recommendation of the Advisory Committee for this item.

Item 9—Fire Fighting and Evacuation Plan Contents; Records and Item 10—AMS Calibration, Testing, Examinations and Records

The Advisory Committee recommended in Item 9:

"Under 30 CFR 75.1101–23(a), the mine Fire Fighting and Evacuation Plan and subsequent revisions should incorporate the operation of the early warning fire detection system and at a minimum, should specify:

- (a) The action to be taken to determine the cause of the alert and alarm signals;
- (b) The location(s) for withdrawal of miners for alert and alarm signals; and
- (c) The procedures to be followed if an alert or alarm signal is activated.

If an alert or alarm is activated, a record should be made of the date, time, location of sensor, concentration at the sensor and the reason for its activation. The records should be reviewed and initialed by management personnel on a monthly basis."

The Advisory Committee recommended in Item 10:

"In order to maintain the early warning fire detection monitoring system in proper operating condition, the following activities should be performed:

- (a) The monitoring system and sensors should be visually examined at least once each coal producing shift;
- (b) Each sensor should be calibrated with a known concentration of carbon monoxide (or equivalent) and air mixtures, sufficient to activate the alarm, at intervals not exceeding 31 calendar days;
- (c) Alert and alarm signals should be tested for operation at intervals not exceeding 7 days; and
- (d) Inspection records should be maintained on the surface, recording the date and time of each weekly test of alert and alarm signals, calibration, and maintenance performed on the system. The records should be maintained for one year and made available to management, MSHA and mine personnel."

MSHA agrees with the Advisory Committee report that there are specific activities following the activation of