

Nonreportable Belt Entry Fires

We have investigated some mine fires of less than 30 minutes duration, even though we do not require reporting of such fires. Since 1987, we have investigated 13 nonreportable belt entry

fires in mines that used an AMS. Three of these mines used both a CO-based AMS and PTHS. Of these 13 fires, four were detected by the AMS, two were detected by sight or smell followed by detection by the AMS, one was detected by the AMS followed by a heat sensor,

and six were detected by sight or smell alone. Anecdotal information suggests that AMS have also detected other events, such as hot belt rollers and belts running in coal before a fire occurred. Table 2 provides information on nonreportable belt entry fires.

TABLE 2.—INVESTIGATED NONREPORTABLE (<30 MINUTES) BELT ENTRY FIRES WHERE AMS USED

	Mine name	Date	Sensor type	Fire detected by * * *	Alert alarm (PPM)	Belt air in working place
1	Sunnyside No 3	5/13/87	CO Sensor & PTHS	Sight and/or Smell	No Record	Yes
2	McClure No 1	4/14/90	CO Sensor	Sight and/or Smell	No Record	
3	McClure No 1	4/15/90	CO Sensor	Sight and/or Smell	No Record	
4	Bethlehem No 84	6/21/91	CO Sensor	AMS	4, 7 & 10	
5	Cambria Slope 33	11/1/91	CO Sensor	Sight and/or Smell	No Record	Yes
6	JWR No 5	5/25/92	CO Sensor	AMS	10 & 15	
7	Blacksville No 2	3/15/92	CO Sensor & PTHS	AMS Then PTHS	10 & 15	
8	Air Quality	2/22/95	CO Sensor	AMS	10 & 15	
9	Lightfoot	10/95	CO Sensor	Sight and/or Smell	No Record	No
10	Bailey	6/19/96	CO Sensor & PTHS	Sight and/or Smell Then AMS	10 & 15	
11	Foidel Creek	10/22/96	CO Sensor	AMS	7 & 11.7	
12	Shoemaker	1/6/00	CO Sensor	Sight	10 & 15	
13	Wabash	10/15/01	CO Sensor	Sight and/or Smell Then AMS	10 & 15	No

AMS—Atmospheric Monitoring System.

ACO—Carbon Monoxide.

PTHS—Point Type Heat Sensor.

III. Summary and Considerations of the Advisory Committee Report, Recent Belt Air Petitions, and BEVR Report

The following summaries are provided to compare the proposed rule with the recommendations made in the Advisory Committee Report and the BEVR Report, as well as requirements contained in recent belt air petitions.

A. Overview of Advisory Committee Recommendations and Proposed Rule Sections

The following section reviews recommendations made by the Advisory Committee and cites applicable proposed rule language. The proposed rule includes the vast majority of the Advisory Committee recommendations. Where the recommended conditions are not included, we discuss MSHA's reasons for not proposing them as part of this rulemaking. In addition, the recommendations are specifically addressed in the Section-by-Section Analysis.

There are three basic issues addressed by the Committee report, with a number of recommendations under each issue. These issues are:

1. The conditions under which belt haulage entries could be safely used as intake air courses to ventilate working places;
2. Minimum air velocities in belt entries; and
3. Ventilation of escapeways.

B. Advisory Committee Recommendations

Advisory Committee Recommendation 1. Belt haulage entries can be safely used as intake air courses to ventilate working places provided additional safety and health conditions are met.

The Advisory Committee affirmed the recommendation that belt air could be safely used providing carbon monoxide or smoke detectors were installed in the belt entry. The Agency agrees, and is proposing to modify § 75.350 to allow the use of belt air provided certain requirements are met, including the installation of an AMS, equipped with carbon monoxide monitors or smoke detectors.

Advisory Committee Recommendation 2. When belt haulage entries are used to ventilate working places, one of the additional conditions is the presence within the belt haulage entry of an early-warning fire detection system.

Included in this recommendation are 14 items for the Agency to consider in administering the implementation of early-warning fire detection systems.

Item 1. Actions Before Using Belt Air for Face Ventilation

The Advisory Committee recommended:

“Prior to belt haulage entries being used to ventilate working places:

(a) Proposed changes should be outlined in the mine ventilation plan;

(b) Miners shall be trained in the basic principles of the early warning fire detection system and the actions required in the event of a section alarm;

(c) Appropriate personnel responsible for installation, maintenance, operation and inspection of the system should be trained in their duties; and

(d) The early warning fire detection system should be inspected by MSHA.”

For mines currently not using belt air to ventilate working sections (*i.e.*, those without granted petitions), the mines would need to receive MSHA approval to make required changes in their ventilation plans prior to using belt air to ventilate working sections. We propose a requirement for training of miners under § 75.350(b)(2). These specific training requirements could be included in the training required under part 48. Specific training requirements for AMS operators are proposed in § 75.351(q).

We did not include in this proposed rule a separate requirement for MSHA to inspect the fire detection system because AMSs used in belt entries would be inspected as part of normal MSHA inspection activities. The proposed rule includes all other conditions of this Advisory Committee item.

Item 2. Capabilities of the AMS

The Advisory Committee recommended:

“The early warning fire detection system should be capable of: