

April 29, 2009

**QUESTIONS AND ANSWERS
MSHA's FINAL RULE ON CONVEYOR BELT,
FIRE PREVENTION AND DETECTION, AND
USE OF AIR FROM THE BELT ENTRY**

Flame-Resistant Conveyor Belt

Part 14 and § 75.1108

Q. How is "placed in service" defined?

A. Placed in service means any belt installed in an underground coal mine, which has been used to transport coal.

Q. Does storing a new roll of Part 18 belt that has not been installed underground constitute placing the belt in service?

A. No. Storing a belt does not constitute placed in service.

Q. Can a Part 18 belt be removed from a mine, trimmed down, and then be reinstalled?

A. Yes. Mine operators may continue these practices if the belts have been placed in service in their mines prior to December 31, 2009.

Q. Can Part 18 belts placed in service prior to December 31, 2009 be removed from one mine and reinstalled in another mine?

A. Yes, but only if it was placed in service prior to December 31, 2009, and the other mine is operated by the same company. The belt may not be marketed for use in other underground coal mining operations.

Q. Our slope belt is a unique product, and we purchased an extra roll of the belt to make emergency repairs if necessary. After December 31, 2009, can a Part 18 conveyor belt be spliced or repaired using Part 18 belt stored at the mine?

A. MSHA will make a determination on specific requests to make splices or repairs related to unique circumstances on a case-by-case basis.

Fire Prevention and Detection and Use of Air From the Belt Entry

Part 48

Q. Will MSHA develop a suggested course of instruction for AMS operator task training?

A. MSHA has already developed a suggested course of instruction, which is available on the Agency's website.

Q. Does MSHA require that the training plan under § 48.27 include the model training program posted on the MSHA website?

A. No. MSHA has developed a model training program that mine operators can tailor to fit specific mining conditions and equipment at their mines, but mine operators are not required to use it.

§ 75.156 - AMS operator, qualifications.

Q. Must all AMS operators be task trained?

A. Yes. To be qualified as an AMS operator, a person must be provided task training on duties and responsibilities at each mine where the person will be employed as an AMS operator, in accordance with the mine operator's approved Part 48 training plan.

Q. How will an AMS operator demonstrate to MSHA that he/she is qualified?

A. MSHA inspectors will make a determination about the AMS operator's qualifications during regular inspections. In making this determination, the inspector will ask the AMS operator questions regarding: the responses to AMS signals; notification requirements; approved mine plans; recordkeeping requirements; and AMS operating requirements. This assures that the AMS operator fully understands how to operate and respond to the AMS, which is critical in the event of an emergency underground. A general list of the questions that inspectors will use is available in the AMS operator training guide on the agency's website.

Q. Must each mine have an AMS operator working on every shift when miners are working underground?

A. Mines using an AMS are required to have a qualified AMS operator whenever personnel are underground when an AMS is used to fulfill any of the requirements of: §§ 75.323(d)(1)(ii) – Actions for excessive methane; 75.340(a)(1)(ii) and 75.340(a)(2)(ii) – Electrical installations; 75.350(b) and 75.350(d) – Use of air from a belt entry to ventilate working sections; or 75.362 – On-shift examinations.

§ 75.333(c) - Ventilation Controls.

Q. Where must airlocks be provided when the pressure exceeds 125 pounds?

A. Airlocks must be provided at all personnel doors along escapeways where the static force created by the pressure differential between air courses exceeds 125 pounds. This requirement applies to all underground coal mines.

Q. How do you calculate the force produced on a personnel door by the pressure differential between two air courses?

A. The force in pounds produced by the pressure differential can be computed by multiplying the pressure drop across the door (in inches of water) times the area of the personnel door (in square feet) times a factor of 5.21. A calculation example is provided in the preamble to the final rule. **Appendix A** to this compliance guide can be used as a reference for the pressure differentials needed to produce a 125 pound force on specific door dimensions.

Q. When calculating the force produced on a personnel door by the pressure differential, do you use the area of the door or the area of the opening?

A. The area used in the calculation should be the open area between the door frames.

Q. How will MSHA measure the pressure differential across a stopping where a personnel door is installed?

A. An MSHA representative will insert a rubber hose or other tubing through a door and connect the tube to a manometer (such as a magnehelic gauge). The gauge will be used to measure the pressure differential across the stopping after closing the door. Either a mechanical or electronic gauge may be used.

Q. In lieu of building airlocks, could a slide be built into the stopping or door to be used to reduce the force on the door?

A. Airlocks are required when the force exceeds 125 pounds. However, mine operators have the option to use alternatives to reduce the force below 125 pounds. Alternatives include reducing the size of a personnel door or providing a sliding mechanism within the door, which may reduce the force to below 125 pounds.

Q. If the force on a door separating an entry common with an escapeway from another air course exceeds 125 pounds, is an airlock required to be established?

A. Yes, if the force created by the pressure differential on doors installed in stoppings along an entry that is common with the escapeway exceeds 125 pounds, an airlock is required. An example is included as **Appendix B**.

§ 75.350(a) Minimum Air Velocity for Mines Not Using Air From the Belt Entry

Q. What alternatives are available if the minimum air velocity of 50 feet per minute cannot be maintained in a mine not using air from the belt entry to ventilate a working section?

A. When requested by the mine operator, the district manager may approve velocities below 50 feet per minute in the ventilation plan based on specific mine conditions. Where the district manager approves lower air velocities, carbon monoxide sensor spacing would have to be reduced to no greater than 350 feet.

Q. Is the minimum air velocity requirement for the belt entry also required in all entries common with the belt?

A. No, unless otherwise required in the ventilation plan. The air quantity in each air course will tend to distribute evenly across all common entries.

§ 75.350(b) - Use of Air from the Belt Entry

Q. What documentation is required to be provided to the MSHA district manager to support the approval of the use of air from the belt entry to ventilate a working section?

A. The mine operator must provide justification in the ventilation plan that the use of air from a belt entry would afford at least the same measure of protection

as where belt haulage entries are not used to ventilate working places. This information should include methane liberation rates on the section and in the belt entry, methane ignition data, degasification data, existing intake air quantity, expected total intake quantity when air from the belt entry is used, and the expected safety benefits of using the additional air.

Q. If the district manager does not approve use of air from the belt entry at a mine that is currently using it to ventilate the working section, when must the use of air from the belt entry be discontinued?

A. The district manager, as part of the plan approval process, will make a determination on the duration of a transition period based on mine-specific conditions. The use of air from the belt entry will be permitted until an appropriate point in the mining cycle is reached where ventilation adjustments can be safely made.

Q. Will MSHA still permit two-entry development?

A. Yes, under the existing regulation, mine operators must submit a 101(c) petition for modification for two-entry development.

Q. What are the new minimum and maximum velocity requirements for mines using air from the belt entry to ventilate the working section?

A. The minimum velocity is 100 feet per minute and the maximum velocity is 1000 feet per minute. When requested by the mine operator, the district manager may approve exceptions to the minimum and maximum velocities in the mine ventilation plan based on mine-specific conditions.

Q. Where will MSHA make air velocity measurements to determine compliance with minimum and maximum air velocities?

A. Consistent with existing inspection procedures, MSHA uses representative cross-sectional areas (such as areas that represent the typical mining height and width along the belt entry) when determining air velocities. Large areas (such as belt channels, boom holes, and fall areas) and restricted areas (such as overcasts) are not representative and would not be used to determine air velocities.

Q. Can a mine use a small quantity of air from the belt entry to ventilate a working section without district manager approval?

A. No. Any quantity of air coursed from the belt entry to ventilate a working section requires district manager approval.

§ 75.350(b)(3) - Respirable Dust

Q. A designated occupation (DO) on a mechanized mining unit (MMU) has a reduced respirable dust standard of 0.8 mg/m³. If the DO standard is later increased to above 1.0 mg/m³, will the designated area (DA) respirable dust standard in the belt air course also increase?

A. If the lowest MMU respirable dust standard rises to 1.0 mg/m³ or more, then the respirable dust standard at the DA located near the section loading point would be 1.0 mg/m³. The average concentration of respirable dust in the belt air course, when used as a section intake air course, must be maintained at the lowest reduced personal dust exposure limit on the MMU, but no greater than 1.0 mg/m³.

§ 75.350(c), § 75.350(d) and § 75.352(g)- Point-Feed Regulators

Q. What requirements must mine operators meet when point-feeding air to the belt and the air is not used to ventilate a working section?

A. This final rule does not change the requirements of § 75.350(c). The use of all point-feed regulators must be approved by the district manager in the mine ventilation plan. Mines that do not use air from the belt entry to ventilate a working section must meet the requirements specified in the approved mine ventilation plan.

Q. If two intake air courses mix within 1,000 feet of a point feed regulator, must a CO sensor be installed 1,000 feet outby the regulator in each air course?

A. Yes. If air from the belt entry is used to ventilate a working section, this intake air course must be monitored at a location 1,000 feet outby the point-feed regulator. If the mixing point is within 1,000 feet of the regulator, both air courses must be monitored by separate CO sensors.

Q. If a mine uses air from the belt entry to ventilate the working section, is an alarm unit required to be installed in the belt entry to provide a signal when the carbon monoxide sensors in the primary escapeway indicate an alarm?

A. Yes. An alarm unit must be provided in the belt entry near the point-feed regulator. MSHA believes that it is more appropriate to locate the signal on the belt air course side of the regulator.

§ 75.351(b)(2) - AMS operators

Q. What does “have as a primary duty” mean for AMS operators?

A. The primary duty of an AMS operator is to monitor and respond to alert, alarm, and malfunction signals. An AMS operator may perform additional duties as long as these signals can be seen or heard, and a timely response can be initiated. MSHA expects that if other duties are assigned to an AMS operator, those duties will not interfere with the operator’s ability to promptly respond to alert, alarm and malfunction signals. During an emergency, the AMS operator’s sole responsibility must be to respond to the emergency.

§ 75.351(e)(1) Carbon monoxide sensors

Q. What are the sensor spacing and air velocity requirements in the belt entry for mines that use air from the belt entry to ventilate a working section?

A. Sensors must be spaced at intervals not exceeding 1,000 feet where the minimum air velocity of 100 feet per minute is maintained. Where approved air velocities are less than 100 feet per minute, but greater than 50 feet per minute, sensor spacing must not exceed 500 feet. Where approved air velocities are less than 50 feet per minute, sensor spacing must not exceed 350 feet.

Q. Where are sensors required at a belt drive, tailpiece, transfer point or take-up?

A. Sensors are required not more than 100 feet downwind of each belt drive unit, each tailpiece, transfer point, and each belt take-up. If the belt drive, tailpiece, and/or take-up for a single transfer point are installed together in the same air course, and the distance between the units is less than 100 feet, they may be monitored with one sensor downwind of the last component. If the distance between the units exceeds 100 feet, additional sensors are required downwind of each belt drive unit, each tailpiece, transfer point, and each belt take-up.

Q. Can MSHA supply a diagram depicting the sensor locations for belt drives to clarify the intent of monitoring various components?

A. **Appendix C** to this compliance guide includes a diagram to help explain the requirements for monitoring belt drive components and belt transfer points.

§ 75.351(e)(2) Smoke Sensors

Q. Are smoke sensors required in addition to carbon monoxide sensors?

A. Smoke sensors are not required at this time. Under the final rule, smoke sensors will be required one year after MSHA determines that a smoke sensor is available to reliably detect fire in underground coal mines. MSHA will continue to monitor smoke sensor testing and evaluation. When smoke sensors are available, MSHA will notify mine operators in a Federal Register notice. Mine operators must then comply with the requirements for installing both smoke and carbon monoxide sensors in those mines that use air from the belt entry to ventilate the working section.

Q. Are mines that do not use air from the belt entry on a working section required to use smoke sensors?

A. No.

§ 75.351(q) AMS operator training

Q. What constitutes compliance with the requirement for AMS operators to travel to all working sections?

A. Section 75.351(q) requires all AMS operators to travel to all working sections at least once every six months to retain familiarity with underground mining systems including haulage, ventilation, communication, and escapeways. This travel should also include areas where mechanized mining equipment is being installed or removed.

Q. Must mine operators keep a record of AMS operator travel to all underground sections every six months?

A. Yes. The mine operator must keep a record of the content of training, the person conducting the training, and the date the training was conducted at the mine for at least one year.

Q. When should annual training be provided?

A. Annual training must be provided once every 12 months. For example, a miner receiving training in December is required to complete retraining no later than the end of December of the subsequent year.

Q. When should the once every six month travel to all working sections be provided?

A. As an example, a miner traveling to all working sections in January is required to complete travel to all working sections again by the end of July that year.

Q. Are the annual training requirements for AMS operators in the final rule separate from Part 48 annual refresher training?

A. Yes. The annual training required for AMS operators in the final rule is in addition to the annual refresher training in Part 48. AMS operators will receive training on those aspects of maintenance and calibration that are directly related to alert, alarm, and malfunction signals in separate training.

§ 75.371(jj) Ventilation Plan - Air Velocity

Q. What will MSHA consider when evaluating an operator's request for alternative minimum and maximum air velocities in the belt entry?

A. The district manager will evaluate the conditions in the mine, including all aspects of the ventilation system. In making a determination on whether to approve requested velocities, the district manager would evaluate the need for increasing fire detection sensitivity by adjusting alert and alarm levels for high velocities or reducing sensor spacing for low velocities.

§ 75.371(mm) Diesel-Discriminating Sensors

Q. Will diesel-discriminating sensors be required?

A. The district manager may require the use of diesel-discriminating sensors in the approved mine ventilation plan. The use of these sensors would be based on mine conditions where diesel-powered equipment is used and excessive alert and alarm signals are caused by diesel exhaust. The operator must include in the ventilation plan the locations of any diesel-discriminating sensors.

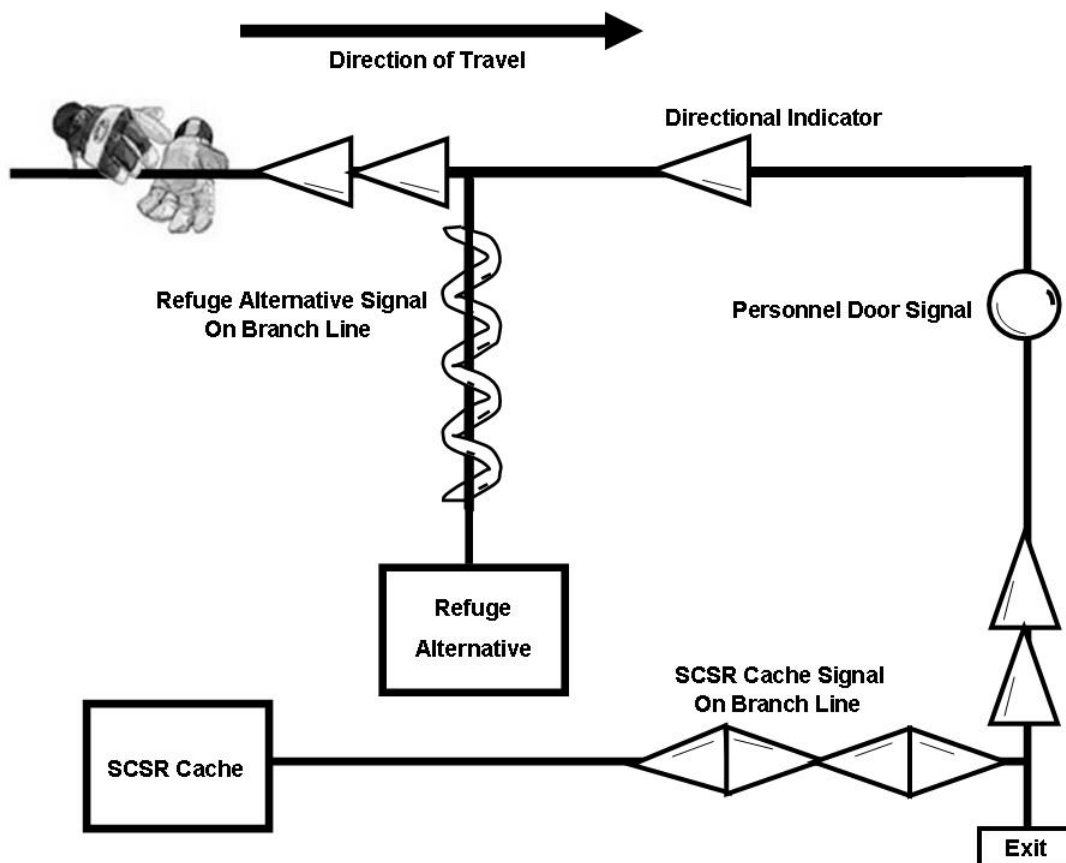
75.380(d) and 75.381(c) Lifelines and Escapeways

Q. Can a mine operator use a system of tactile signals on the lifeline other than that specified in the final rule?

A. No, a mine operator cannot use a system that is different than that specified in the final rule.

Q. Is there a diagram available to assist mine operators in installing lifeline signals?

A. Yes, the following diagram shows how these signals must be installed. The diagram depicts three signals that must be attached to the lifeline. These are for direction of travel, location of personnel doors, and a signal to alert miners that a branch line is ahead that would lead to either a self contained self rescue (SCSR) storage cache or a refuge alternative. Additional signals are required on the branch lines to identify whether it leads to an SCSR storage cache or a refuge alternative.



Q. What are the flame-resistance requirements for the lifeline, branch line, and tactile signals?

A. As discussed in the Compliance Guide for Emergency Mine Evacuation, the rope or cable used for the lifeline and branch lines must meet the flame-resistance requirements of § 18.65. There are no flame-resistant requirements for the tactile signals.

Q. Is a braided nylon cord acceptable for the lifeline and branch lines?

A. Yes, as long as the cord meets the flame resistance requirements of § 18.65. MSHA also expects the cord will maintain its integrity under normal mine conditions, and serve the intended purpose for guiding miners through the escapeway in emergency situations.

Q. Can tennis balls be used as tactile signals on lifelines to indicate the locations of personnel doors?

A. In the preamble of the final rule MSHA uses a tennis ball as an example of a sphere. While there are commercially-available spheres which could be used, there may be other spheres that can be modified to be securely attached to a lifeline which could be used to meet the standard. If tennis balls are used as spheres, they must maintain their shape in the mine environment and serve their intended purpose.

Q. What is a suitable size for tactile signals?

A. MSHA expects mine operators to use signals of suitable size to permit miners to identify each signal while using the lifeline in smoke. When making a determination on the suitability of the size, mine operators should expect miners to be wearing gloves when using the lifeline. If the shape cannot be easily distinguishable by a miner wearing gloves, the size is not suitable.

Q. How do the tactile signals need to be installed on the lifeline?

A. Tactile signals must be securely attached to the lifeline. To be securely attached, MSHA expects the lifeline to pass through the center of the tactile signal.

Q. Must a branch line be installed from the sphere on the lifeline to all personnel doors installed in adjacent crosscuts?

A. No.

Q. Can lifelines be run directly to SCSR caches and refuge alternatives without using branch lines?

A. No. Branch lines and associated tactile signals are required to be installed from the lifeline to SCSR caches and refuge alternatives.

Q. If a refuge alternative is located inby the section tailpiece, must the mine operator install a branch line from the lifeline to the refuge alternative?

A. Yes.

75.380(f) and 75.381(e) Primary Escapeways

Q. In areas of the mine where the ventilation pressure in the primary escapeway cannot be maintained higher than the belt entry, what alternative methods will MSHA consider for reducing leakage and protecting the integrity of the primary escapeway?

A. Alternatives may include a combination of: upgrading the stopping construction materials and techniques; an enhanced program of periodic stopping inspection; diligent repair of stoppings and doors; and improved sealant applications. Any alternative must be approved by the district manager in the mine ventilation plan.

Adding a brattice curtain or plastic covering over the stopping and around the perimeter may reduce leakage. Wet-stacked block stoppings may reduce leakage by up to 80 percent over dry-stacked stoppings. Repairing damaged personnel doors and frames can reduce leakage by 50 percent or more.

The Agency does not accept the use of check curtains or other temporary ventilation controls such as parachute stoppings to increase the resistance in the primary escapeway in order to pressurize the air course during normal mining.

§ 75.1103-4 Automatic Fire Sensor and Warning Device Systems

Q. When must carbon monoxide sensors be installed in mines that use point-type heat sensors for fire detection?

A. The final rule establishes a compliance date of December 31, 2009, for installing carbon monoxide sensors in mines that currently use point-type heat sensors for fire detection. Mine operators must comply with the standards and ventilation plan requirements that were in effect prior this final rule while completing the installation of sensors needed to meet the new standards. When mine operators install carbon monoxide sensors, MSHA expects that they will comply with the other provisions related to carbon monoxide sensor maintenance, examination and test requirements, actions and response to signals (§§ 75.1103-4(b), 75.1103-5 and 75.1103-8).

Because of various systems designs and installations in place, the following examples of fire detection compliance issues have been developed for guidance.

Examples of Fire Detection System Compliance

1. A mine uses a Point-Type Heat Sensor (PTHS) system.

This mine operator would be required to install carbon monoxide sensors as specified in the rule by December 31, 2009. The PTHS system must be maintained and operated until the carbon monoxide sensor system is installed. The operator must comply with the minimum air velocity of 50 fpm when the transition to the CO sensors is completed unless sensor spacing has already been reduced to 350 feet or less. Mine operators will need to revise mine emergency evacuation and firefighting programs of instruction, and determine the ambient CO level unless an ambient level of 0 ppm is used.

2. A mine uses carbon monoxide sensors in lieu of PTHS, with sensor spacing of 2000 feet. Alert and alarm levels of 10 and 15 ppm CO are in place.

This mine operator must add sensors to reduce spacing to 1000 feet and establish a single warning level of 10 ppm by December 31, 2009. The minimum air velocity of 50 fpm must be maintained unless sensor spacing has already been reduced to 350 feet or less. Locations where the 50 fpm minimum velocities cannot be maintained must be identified in the mine ventilation plan. Mine operators will need to revise mine emergency evacuation and firefighting programs of instruction and retrain miners on requirements for mine evacuation.

3. A mine uses carbon monoxide sensors as specified in a petition for modification of 75.1103-4(a).

The final rule supersedes granted petitions for modification. The minimum air velocity of 50 fpm must be maintained unless sensor spacing has already been reduced to 350 feet or less. The mine operator will be required to comply with

the requirements of the granted petition until the fire detection system is fully installed. After the fire detection system is fully installed, the mine operator must comply with all of the provisions of the final rule.

Q. Where are sensors required at a belt drive, tailpiece, transfer point or take-up?

A. Sensors are required not more than 100 feet downwind of each belt drive unit, each tailpiece, transfer point, and each belt take-up. If the belt drive, tailpiece, and/or take-up for a single transfer point are installed together in the same air course, and the distance between the units is less than 100 feet, they may be monitored with one sensor downwind of the last component. If the distance between the units exceeds 100 feet, additional sensors are required downwind of each belt drive unit, each tailpiece, transfer point, and each belt take-up.

Q. Can MSHA supply a diagram depicting the sensor locations for belt drives to clarify the intent of monitoring various components?

A. **Appendix D** to this compliance guide includes a diagram to help explain the requirements for monitoring belt drive components and belt transfer points.

Q. If a mine not using air from the belt entry to ventilate a working section is not able to maintain the minimum velocity of 50 feet per minute, is there an alternative to increasing the air velocity?

A. When requested by the mine operator, the district manager may approve lower velocities in the ventilation plan based on specific mine conditions. Where the minimum 50 feet per minute air velocity cannot be maintained, sensor spacing must not exceed 350 feet to maintain the fire detection system capabilities.

Q. Where will MSHA take air velocity measurements to determine compliance with minimum and maximum air velocities?

A. Consistent with existing inspection procedures, MSHA uses representative cross-sectional areas (such as areas that represent the typical mining height and width along the belt entry) when determining air velocities. Large areas (such as belt channels, boom holes, and fall areas) and restricted areas (such as overcasts) are not representative and would not be used to determine air velocities.

Q. Our mine does not use air from the belt entry to ventilate working sections, and the CO sensors have both alert and alarm signals programmed at 5 and 10

parts per million, respectively. What should we do about the alert level since the final rule requires only one warning signal at 10 parts per million?

A. Although the final rule requires a single warning signal at 10 ppm CO above the ambient level, it does not prohibit mine operators from continuing to use signals set below 10 parts per million. Therefore, mines may continue to use signals programmed at 5 ppm CO above the ambient level.

Q. The final rule allows for fire warning other than carbon monoxide to be used as long as they are spaced at regular intervals to provide protection equivalent to carbon monoxide sensors. Does this mean heat sensors spaced at 50-foot intervals can be installed along the belt to comply?

A. No. The final rule removes the reference to point-type heat sensors and replaces it with carbon monoxide sensors. Point-type heat sensors cannot be used for fire detection along belt conveyors.

Q. Is an AMS required to be installed and used to comply with § 75.1103-4?

A. No. Any system of carbon monoxide sensors meeting the provisions of the final rule may be used for fire detection along belt entries.

Q. In mines that do not use air from the belt entry to ventilate a working section, will qualified AMS operators be required?

A. No. There is no requirement for a qualified AMS operator in mines that do not use air from the belt entry to ventilate a working section, unless an AMS operator is required in accordance with § 75.351(a).

Q. Which maps posted on the surface must include the locations of CO sensors?

A. The mine maps required by §§ 75.1200 (Mine map) and 75.1505 (Escapeway map) must include the location of all CO sensors.

§ 75.1103-5 Actions and Response

Q. When must mine operators comply with the actions and responses to carbon monoxide sensors contained in § 75.1103-5?

A. When mine operators come into compliance with § 75.1103-4(a), MSHA expects compliance with the other provisions related to the maintenance, examination and test requirements, actions and response to signals (§§ 75.1103-4(b), 75.1103-5 and 75.1103-8).

Q. What does the term “immediately” mean with regard to notifying appropriate personnel of a malfunction or warning signal as used in § 75.1103-5(e)?

A. The term immediately in the final rule means that the required actions must be promptly initiated after a malfunction or warning signal is received. The amount of time it takes to resolve the issue depends on the occurrence. MSHA does not intend that the use of the term immediately in the final rule be the same as the 15-minute immediate accident notification requirement in existing § 50.10.

Q. What is an effective warning signal?

A. For a warning signal to be effective, it must be located where it can be seen or heard.

§ 75.1103-6 Actuation of Fire Suppression Systems

Q. Can point-type heat sensors be used to actuate fire suppression systems?

A. Point-type heat sensors or automatic fire sensor and warning device systems may be used to actuate deluge-type water systems, foam generator systems, multipurpose dry-powder systems, or other equivalent automatic fire suppression systems.

§ 75.1103-8 Examination and Test Requirements

Q. What is the compliance date for the examination and test requirements for carbon monoxide sensors contained in § 75.1103-8?

A. When mine operators come into compliance with § 75.1103-4(a), MSHA expects compliance with the other provisions related to the maintenance, examination and test requirements, actions and response to signals (§§ 75.1103-4(b), 75.1103-5 and 75.1103-8).

Q. What constitutes a functional test of warning signal devices?

A. MSHA expects the functional test to verify that warning signals are effective, that is they provide audible or visual warning at all locations where these signals are provided. Consistent with existing practice, MSHA expects that functional tests will include application of carbon monoxide gas to the sensors necessary to activate each warning signal.

Q. What constitutes an examination required by this section?

A. The examinations required by this section should identify any problems with sensors, such as improper installation, damaged or missing sensors, cables and alarm units. The Agency believes that the examination requirements can be integrated into required preshift and onshift examinations under existing §§ 75.360 and 75.362.

§ 75.1731 Maintenance of Belt Conveyors and Belt Conveyor Entries

Q. What materials are prohibited in the belt entry?

A. Materials must not be allowed in the belt conveyor entry where the material may contribute to a frictional heating hazard. Such materials may include rock, trash, discarded conveyor belt parts, posts, and cribs. These materials may become potential frictional ignition sources and result in a belt fire. MSHA does not intend that these materials include rock dust used in the belt entry. Materials may be stored in crosscuts or other locations if they do not contribute to a frictional heating hazard.

Q. When must damaged rollers, or other damaged belt components, be repaired or replaced?

A. MSHA expects a mine operator to repair damaged rollers, or other damaged components which pose a fire hazard, immediately upon discovery. A fire hazard can be present when the damaged rollers, or other damaged components, create a frictional heating hazard (e.g. rubbing against the belt, in contact with coal spillage, smoking). The Agency will allow sufficient time for the belt to be emptied and shut down if needed. Repairs must be completed before the belt can be re-started. All other damaged rollers, or other damaged belt conveyor components, must be repaired or replaced within an appropriate time.

Q. What type of splice will be acceptable for maintaining flame-resistant properties?

A. MSHA will, at the request of approval holders or mine operators, make a suitability evaluation to determine if a splice kit maintains flame-resistant properties of the belt. MSHA will place a list of suitable splice kits on the Agency's website and provide the list to interested stakeholders. Splice kits which have been evaluated by MSHA must be used when splicing Part 14 belts after December 31, 2009.

Q. Many belts have scrapers and cleaners installed to keep material from traveling back on the return side of the belt, and skirting to confine material at belt transfer points. How will MSHA view these devices in relation to belt maintenance?

A. Proper installation and maintenance of these types of devices should guide mine operators and inspectors on the identification of hazardous conditions. The Agency is not aware of any fires that have been caused by the use of properly installed and maintained scrapers, cleaners and skirting near belt transfer points, which are used to avoid other potential hazardous conditions, and are accepted practice in underground mines. However, if cleaners and skirting are not maintained in a manner as designed, they could become sources of potential frictional heating hazards. Lack of water application or scraping dry belts can also lead to elevated respirable dust levels.

Q. The blowing ventilation system used at our mine requires the use of box checks to limit the flow of air out of the mine in the belt air course. These checks are installed very close to the belt and at times the flaps installed around the belt to produce a tight seal do come in contact with the moving belt. How will MSHA enforce § 75.1731 at these locations?

A. MSHA recognizes the installation of belt checks is critical to many blowing ventilation systems. The Agency expects these ventilation controls to be installed in a manner and with materials that would limit the potential for frictional ignition. Flaps installed near the moving belt should be made from noncombustible materials, or materials such as belting which meets the improved flame-resistance approval requirements.

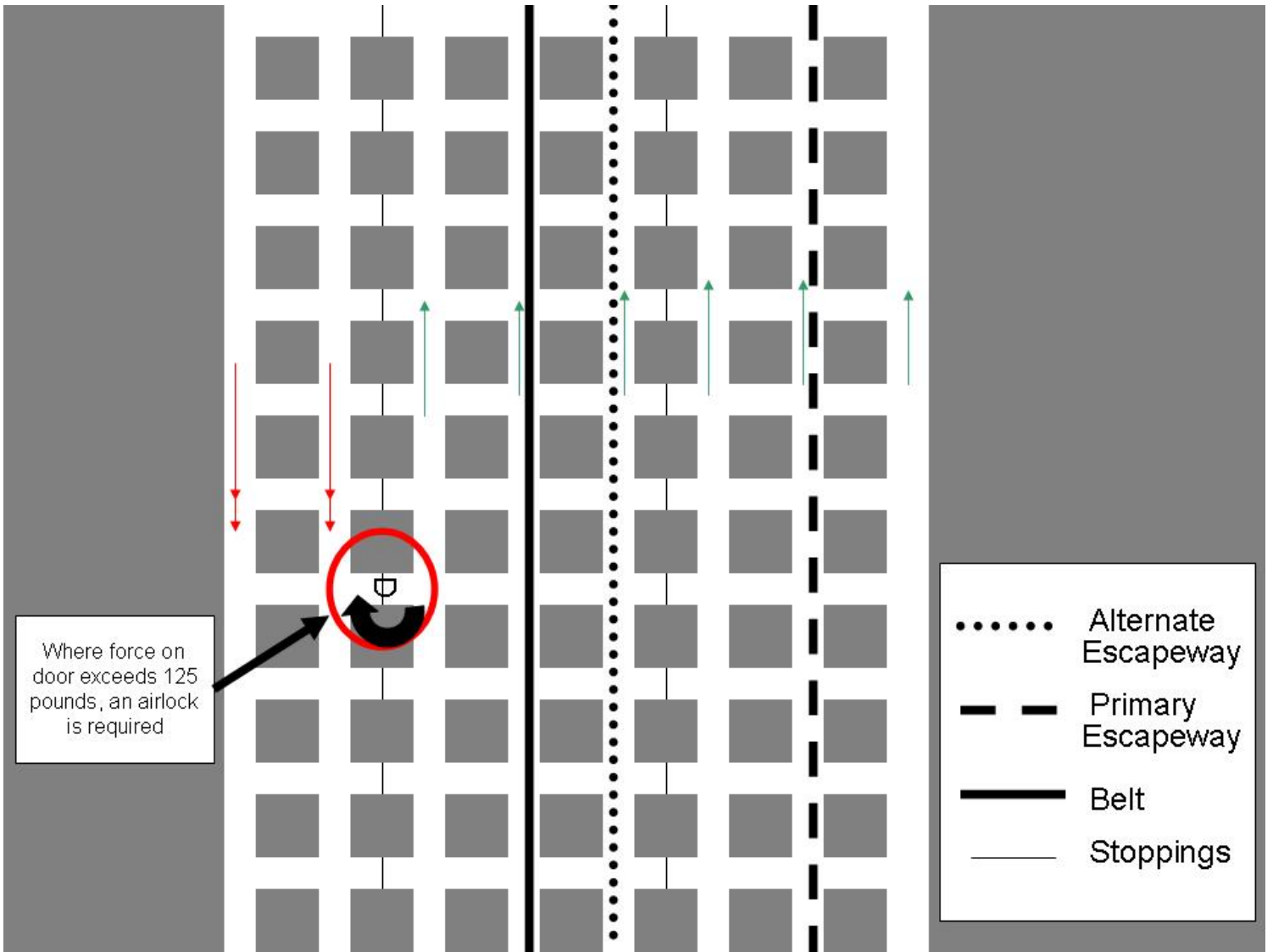
Q. What is belt misalignment?

A. Belt misalignment occurs when the belt is tracking in a manner that allows frictional contact between the belt and the belt structure.

APPENDIX A

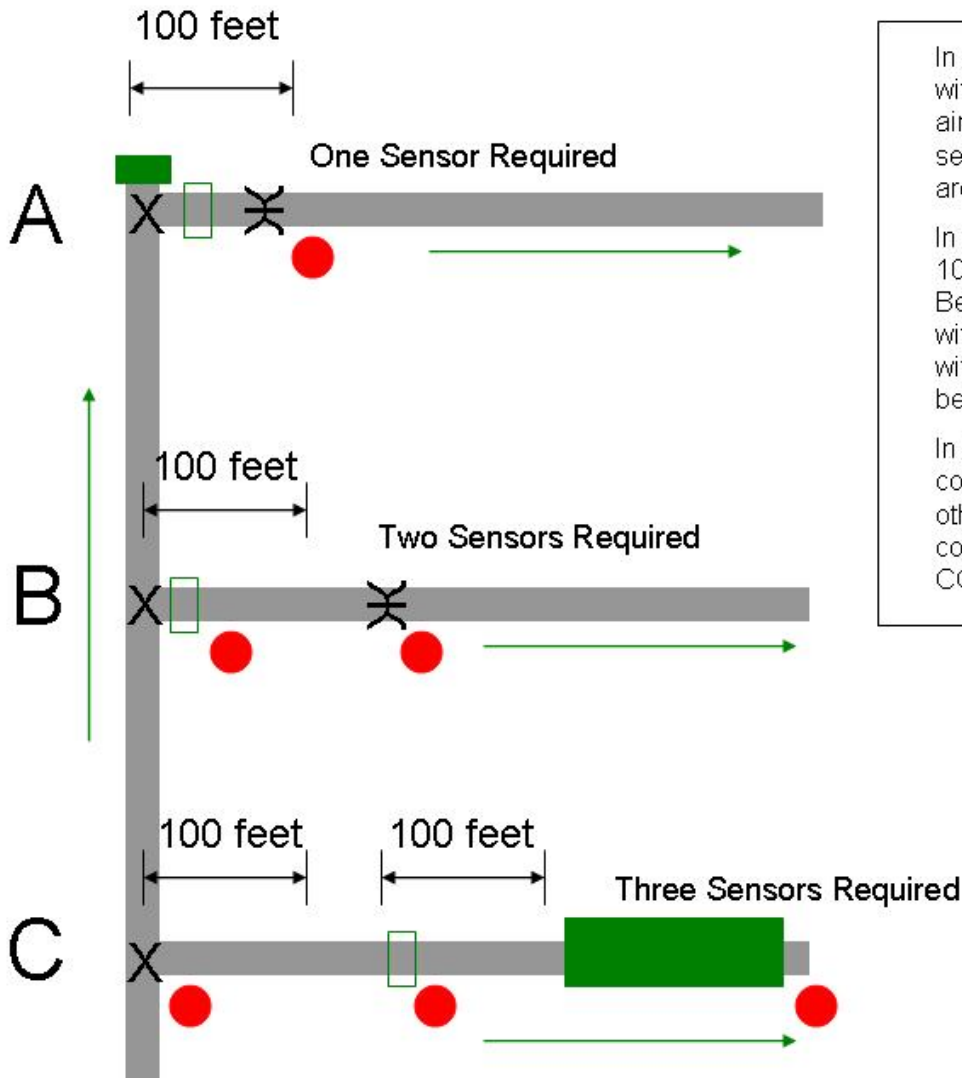
Force Created by Static Pressure Differential on Personnel Doors							
Force in Pounds							
Pressure Differential inches w.g.	30" x 30"	36" x 36"	36" x 42"	36" x 48"	36" x 72"	48" x 60"	Door Size
	6.25	9.00	10.50	12.00	18.00	20.00	Area, square Feet
1.0	33	47	55	62	94	104	No Air Lock required
1.1	36	51	60	69	103	114	
1.2	39	56	66	75	112	125.04	
1.3	42	61	71	81	122	135	Air Lock Required
1.4	46	66	76	87	131	146	
1.5	49	70	82	94	140	156	
1.6	52	75	87	100	150	166	
1.7	55	80	93	106	159	177	
1.8	59	84	98	112	168	187	
1.9	62	89	104	119	178	198	
2.0	65	94	109	125.04	187	208	
2.1	68	98	115	131	197	218	
2.2	72	103	120	137	206	229	
2.3	75	108	126	144	215	239	
2.4	78	112	131	150	225	250	
2.5	81	117	137	156	234	260	
2.6	85	122	142	162	243	270	
2.7	88	126	147	168	253	281	
2.8	91	131	153	175	262	291	
2.9	94	136	158	181	271	302	
3.0	98	140	164	187	281	312	
3.1	101	145	169	193	290	322	
3.2	104	150	175	200	300	333	
3.3	107	154	180	206	309	343	
3.4	111	159	186	212	318	354	
3.5	114	164	191	218	328	364	
3.6	117	168	197	225	337	374	
3.7	120	173	202	231	346	385	
3.8	124	178	207	237	356	395	
3.9	127	183	213	243	365	406	
4.0	130	187	218	250	374	416	
4.1	133	192	224	256	384	426	
4.2	137	197	229	262	393	437	

APPENDIX B



APPENDIX C

(For mines using air from the belt entry to ventilate a working section)



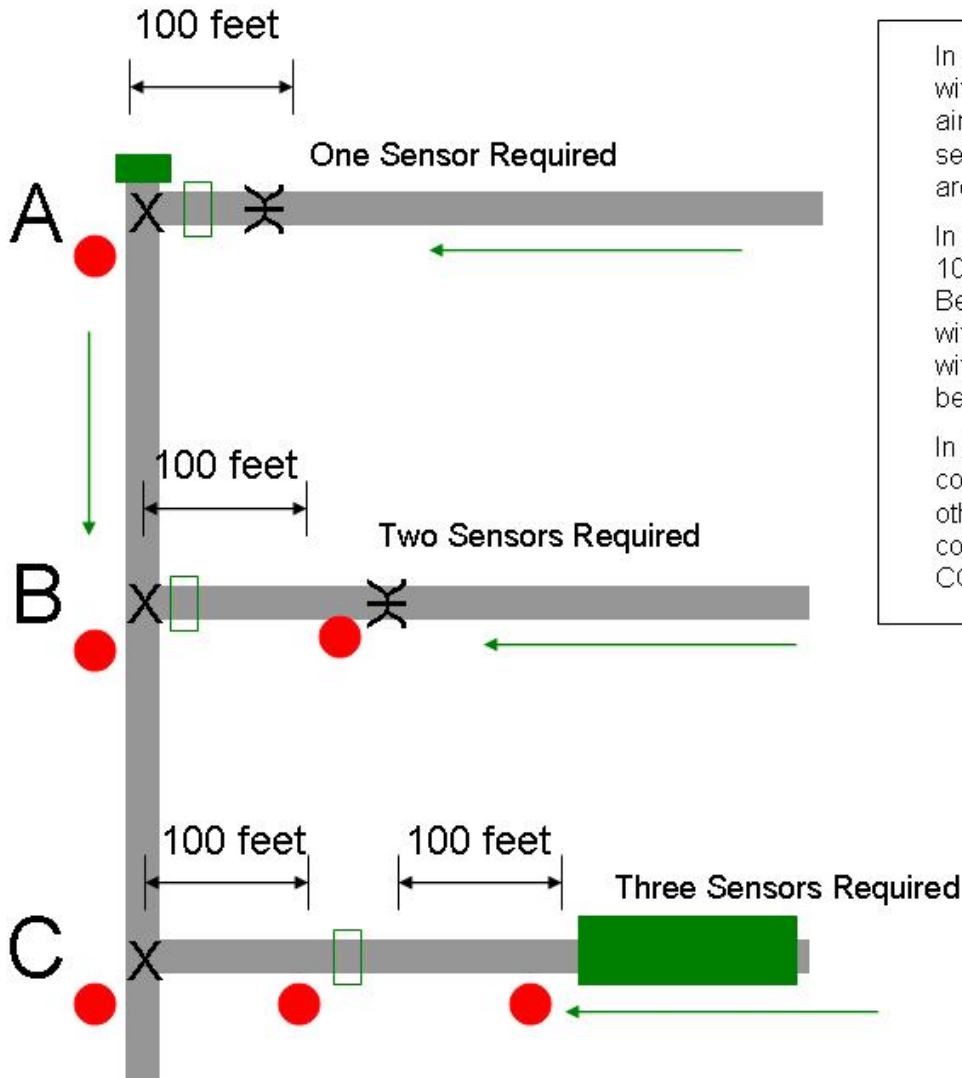
In layout A, all four components are within 100 feet, and are in the same airstream. Therefore, only one CO sensor is needed to monitor the drive area components.

In layout B, the belt takeup is more than 100 feet from the transfer point. Because the drive and transfer point are within 100 feet, they can be monitored with one sensor. A second sensor must be installed downwind of the takeup.

In layout C, none of the three components are within 100 feet of any other. In this case, each of the three components must be monitored with a CO sensor.

X	Transfer Point
→	Air Direction
—	Belt
■	Belt Tailpiece
□	Belt Drive
⌘	Belt Takeup
■	Takeup/Storage Unit
●	CO Sensor

APPENDIX D



In layout A, all four components are within 100 feet, and are in the same airstream. Therefore, only one CO sensor is needed to monitor the drive area components.

In layout B, the belt takeup is more than 100 feet from the transfer point. Because the drive and transfer point are within 100 feet, they can be monitored with one sensor. A second sensor must be installed downwind of the takeup.

In layout C, none of the three components are within 100 feet of any other. In this case, each of the three components must be monitored with a CO sensor.

X	Transfer Point
→	Air Direction
—	Belt
■	Belt Tailpiece
□	Belt Drive
X	Belt Takeup
■	Takeup/Storage Unit
●	CO Sensor