

In the matter of  
Mountain Coal Company, LLC  
West Elk Mine  
I.D. No. 05-03672

Petition for Modification  
  
Docket No. M-2002-073-C

PROPOSED DECISION AND ORDER

On August 27, 2002, a petition was filed seeking a modification of the application of 30 CFR 75.352 to Petitioner's West Elk Mine, located at 5174 Highway 133, Somerset, Colorado. The Petitioner seeks a modification to the Standard that requires entries used as return air courses to be separated from belt haulage entries by permanent ventilation controls.

The Petitioner proposes an alternative method to allow a portion of the No.4 belt entry to be temporarily used as a return air course. The Petitioner alleges that the alternative method proposed in the petition will at all times guarantee no less than the same measure of protection afforded by the standard.

The petitioner proposes to achieve the equivalent level of safety by applying the stipulations that will remain in effect only until a return aircourse can be established between the E-seam and the shaft that connects the B-seam to the F-seam.

In accordance with a previous Petition for Modification, Docket No. M-93-158-C (belt air on intake), CO sensors are currently being used in the belt entries and at all point feed locations within the F-Seam, and the B-Seam.

MSHA personnel conducted an investigation on October 17, 2002, and filed a report of their findings and recommendations with the Administrator for Coal Mine Safety and Health. An additional investigation was conducted on comments received from the Petitioner, and finalized on April 9, 2003. After a careful review of the entire record, including the petition, and MSHA's investigative reports and recommendations, this Proposed Decision and Order (PDO) is issued.

Finding of Fact and Conclusion of Law

The petition for the subject mine will use an alternative method of achieving the results of the standard. The alternative method

set out in the petition, as applied to using a portion of the NO. 4 belt entry as a return entry, will at all times guarantee no less than the same measure of protection to all miners as would be provided by the mandatory standard. Therefore, on the basis of the petition and the findings of MSHA's investigation, Mountain Coal Company, LLC, is granted a modification of the application of 30 CFR 75.352 to its West Elk Mine.

#### ORDER

Wherefore, pursuant to the authority delegated by the Secretary of Labor to the Administrator for Coal Mine Safety and Health, and pursuant to Section 101(c) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C., sec. 811(c), it is ordered that Mountain Coal Company, LLC's Petition for Modification of the application of 30 CFR 75.352 in the West Elk Mine is hereby:

GRANTED, for use of belt haulage in a return aircourse, only between the F and B coal seams along the No. 4 belt in the No. 1 Rock Slope entry, during initial development of the E-Seam, between the rock slopes and the inner-seam return air shaft, conditioned upon compliance with the following terms and conditions:

1. Requirements Applicable to the No. 4 Belt Entry, During Initial Development of the E-Seam, between the Rock Slopes and the Inner-Seam Return Air Shaft.

- (A) An atmospheric monitoring system (AMS) incorporating diesel discriminating (carbon monoxide and nitric oxide) sensors for early warning fire detection shall be installed in the belt entry used as a return as follows:
- (1) Sensors shall be installed in the belt entry, at a location between 50 and 100 feet down wind of any box check, tailpiece, transfer, feeder, belt drive, or, and at intervals not to exceed 1000 feet along the belt conveyor entry, except as provided in paragraphs (A)(2) and (J).
  - (2) Sensors shall be installed in the belt entry at locations not more than 100 feet down wind of any intake air point-feed. The location of the point-

feed shall be shown on the 30 CFR 75.372 map. The point-feed shall be constructed as a permanent ventilation control in accordance with 30 CFR 75.333, shall be provided with a means to adjust or close the opening in the event of an emergency. All point-feed location(s) shall be included in the approved mine ventilation plan.

- (3) Sensors shall be installed near the center in the upper third of the belt entry in a location that would not expose personnel working on the system to unsafe situations, and in areas where they are not exposed to damage from mobile equipment. Sensors shall not be located in intersections, abnormally high areas or in other areas where air flow patterns do not permit products of combustion to be carried to the sensors.
- (4) Where the return air is directed out of the belt conveyor entry, a sensor shall be installed in the belt entry 25 feet in by that location and a sensor shall be installed between where the return air is directed out of the belt conveyor entry and the ventilation box check device.

(B) Air velocity requirements in the belt entry.

- (1) The air in the monitored entry(s) shall have a velocity of at least 50 feet a minute and have a definite and distinct movement in the designated direction.
- (2) Velocity measurements shall be determined at locations in the entry which are representative of the cross-sectional areas found throughout the entry and not at locations where the entry is abnormally high (e.g. belt drives) or low (e.g. under overcasts).

(C) Corrected carbon monoxide ambient, alert, and alarm levels shall be as follows:

- (1) Upon implementation of this PDO, corrected carbon monoxide ambient level shall be 5 ppm.

- (2) The alert and alarm levels shall be 10 ppm and 15 ppm, respectively above the corrected ambient level.
  - (3) The atmospheric monitoring system shall also activate an alarm signal if the total concentration of uncorrected carbon monoxide, measured by any sensor, exceeds or is equal to 50 ppm. This concentration shall represent all the carbon monoxide present in the sensor's atmosphere which includes carbon monoxide from diesel engines.
- (D) Audible and visual alarm devices used on the section shall be of the permissible type if installed in areas where permissible equipment is required. Alarm devices shall give visual and audible signals that can be seen and heard at all times on the working section and at a location on the surface of the mine where a responsible person(s) is on duty at all times when miners are underground. Alert devices shall give visual or audible signals that can be seen or heard at all times at such surface location whenever miners are underground. When audible signals are used for the alert and alarm, the signals shall be distinguishable from each other.
- (1) The atmospheric monitoring system may be designed to include a time delay period for carbon monoxide alert and alarm signals not to exceed 60 seconds. When a sensor response remains within the alert or alarm range for more than the predetermined length of time delay, visual and/or audible signals will be given at those levels.
  - (2) When the atmospheric monitoring system gives any visual or audible alert signal, all persons in the same split of air shall immediately be notified and appropriate action shall be taken to determine the cause of the actuation. When the atmospheric system gives any audible alarm signal, all persons in the same split(s) of air shall immediately be withdrawn to a safe location outby the sensor(s) activating the alarm, unless the cause is known not to be a hazard to the miners. When the

atmospheric monitoring system gives any audible alarm at shift change, no one shall be permitted to enter the mine except qualified persons designated to investigate the source of the alarm. If miners are en route into the mine, they shall be held at, or be withdrawn to, a safe location outby the sensor(s) activating the alarm. When a determination is made as to the source of the alarm, and that the mine is safe to enter, the miners shall be permitted underground.

- (3) The mine evacuation plan required by 30 CFR 75.1101-23(a) shall be revised to specify the action to be taken to determine the cause of the alert and alarm signals, the location(s) for withdrawal of miners for each alarm signal, the steps to be taken after the cause of an alert signal is determined, and the procedures to be followed if an alarm signal is activated. Such revisions shall be approved by the District Manager. A record of each alert and alarm signal given and the action taken shall be maintained at the mine for a period of 1 year and made available to all interested persons.
- (E) When miners are underground, a responsible person shall be on duty at all times at a surface location at the mine to see the visual alert and hear the audible alarm signals of the atmospheric monitoring system when the carbon monoxide reaches the levels established in paragraph I.(C)(2). This person shall have two-way communications with all working sections. When the established alarm signal levels are reached, the person shall notify miners who are working inby the affected sensor. The responsible person shall be trained in the operation of the atmospheric monitoring system and in the proper procedures to follow in the event of an emergency or malfunction and, in that event, shall take appropriate action immediately.
- (F) The atmospheric monitoring system shall be examined visually at least once each coal-producing shift and tested for functional operation at intervals not exceeding 7 days to ensure the monitoring system is

functioning properly and that required maintenance is being performed. The monitoring system shall be calibrated with known concentrations of nitric oxide, carbon monoxide and air mixtures at intervals not exceeding 31 calendar days. A record of all weekly inspections, monthly calibrations, and all maintenance shall be maintained on the surface and made available to all interested persons. The inspection record shall show the time and date of each weekly inspection, calibration, and all maintenance performed on the system.

- (G) The atmospheric monitoring system shall remain operative for the purpose of giving warning of a fire for a minimum of 4 hours after the source of power to the belt is removed except when power is removed during a fan stoppage or when the belt haulageway is examined as provided in 30 CFR 75.1103-4(e)(1) and (e)(2).
- (H) The atmospheric monitoring system shall be capable of detecting electrical malfunctions such as electrical short circuits, open circuits, and ground-faults and, where appropriate, pneumatic malfunctions in the system.
- (I) The atmospheric monitoring system shall be capable of identifying any activated sensor. A map or schematic identifying each belt flight and the details for the monitoring system shall be posted at the mine.
- (J) If at any time, the atmospheric monitoring system which consists of both diesel discriminating sensors and methane sensors as outlined in Section II, or any portion of these systems required by this modification has been deenergized for reasons such as routine maintenance or failure of a sensor unit, the belt conveyor may continue to operate provided the miners in the working section affected are notified of the situation and the affected portion of the belt conveyor or intake entry(s) is continuously patrolled and monitored for carbon monoxide and methane in the following manner until the affected monitoring system is returned to normal operation:

- (1) The patrolling and monitoring must be conducted by a qualified person or persons.
- (2) The qualified person(s) performing atmospheric monitoring for carbon monoxide and methane or both shall at all times be equipped with a two-way communication device enabling the person(s) performing the monitoring to communicate with the surface. Mine phones spaced a maximum of 1000 feet may be used for the communication device. When used for this purpose, the mine phone location shall be conspicuously identified.
- (3) If one sensor becomes inoperative, a qualified person shall monitor at that location.
- (4) If two or more adjacent sensors become inoperative, a qualified person shall patrol and monitor the area affected at least once each hour.
- (5) If the complete system becomes inoperative, a sufficient number of qualified persons shall patrol and monitor the affected entries of the mine so that the affected entries will be traveled once each hour in their entirety.
- (6) Each of these qualified persons shall be provided with a hand-held carbon monoxide detector and a hand-held methane detector. A carbon monoxide detector and a methane detector shall also be available for use on each working section in the event the monitoring system is deenergized or fails.
- (7) The procedures outlined above are applicable only for a short period of time and are to be determined by the reasonable amount of time required to repair or replace the equipment causing the malfunction. The mine operator shall begin corrective action immediately and continue until the defective equipment causing the malfunction is replaced or repaired. The responsible person on the surface shall immediately establish two-way communications with

the working section(s) and notify them of the particular malfunction(s) or problem(s).

- (8) Monitoring with hand-held detectors shall not be used in lieu of installation and use of the fire detection and methane monitoring systems described in this PDO.
- (9) Time delays shall not be applied to measurements made with hand-held detectors. Since hand-held detectors measurements will include carbon monoxide from diesel-powered equipment, the alert and alarm levels for carbon monoxide when qualified persons are patrolling or monitoring with hand-held detectors shall be 15 ppm and 20 ppm, respectively. These levels shall be incorporated and included as a part of the Ventilation Plan required by 30 CFR 75.370.
- (K) The details for the fire detection system and methane monitoring system, including the type of monitor and specific sensor location on the mine map, shall be included as a part of the Ventilation Plan required by 30 CFR 75.370. The District Manager may require additional DDS carbon monoxide sensors and methane sensors to be installed as part of said plan to ensure the safety of the miners.
- (L) Mantrip cars or personnel carriers or other transportation equipment shall be maintained on or near the working section and be of sufficient capacity to transport all persons who may be in the area. Mantrip cars may be located in by the section loading point or within 300 feet out by the section loading point.
- (M) During development of the E-Seam, a rock dusting unit or the discharge hose of a rock dusting unit shall be installed in the belt conveyor entry near the section loading point. The rock dusting unit shall be operated continuously when coal is being produced to render inert float coal dust in these entries, except when miners are performing maintenance, inspections, or other required work in these areas.

- (N) At least one self-contained self-rescuer shall be available for each person on the working section at all times and shall be carried into the section and carried on the section, or stored on the section, while advancing the two-entry development. These locations shall be specified in the storage plan approved by the District Manager.
- (O) A new a conveyor-belt flammability test has been developed by MSHA. When compatible belting identified by MSHA as having passed the new flame-resistant test becomes commercially available, all subsequent belt purchases shall be of this improved type belting.
- (P) Compressor stations and unattended portable compressors shall not be located in the two-entry panel.

## II. Additional Requirements.

- (A) A methane monitoring system utilizing methane sensors shall be incorporated into the AMS and be installed to monitor the air in each belt haulage entry. The sensors shall be located so that the belt air is monitored where the return air enters the No. 4 belt entry and where the return air exits the No. 4 belt entry and where needed along the No. 4 belt flight in order to maintain methane levels at or below 1.0%.
- (B) The methane monitoring system shall be capable of providing both audible and visual signals on both the working section and at a manned location on the surface of the mine where personnel will be on duty at all times when miners are underground or when the No. 4 belt conveyor is operating. This trained person at the surface shall have two-way communication with all working sections. The system shall initiate alarm signals when the methane level is 1.0 volume per centum. The methane monitoring system shall be

designed and installed to deenergize the belt conveyor drive

units when the methane level is 1.0 volume per centum. Upon notification of the alarm, miners shall deenergize all other equipment located in the E-Seam.

- (C) The methane monitoring system shall be visually examined at least once every working shift to ensure proper functioning. The system shall be inspected by a person qualified for such work at intervals not exceeding 7 days. The qualified person shall ensure that the devices are operating properly and that the required maintenance, as recommended by the manufacturer, is performed. The monitoring devices shall be calibrated with known quantities of methane-air mixtures at intervals not exceeding 31 calendar days. An inspection record shall be maintained on the surface and made available to all interested persons. The inspection record shall show the date and time of each weekly inspection and calibration of the monitor and all maintenance performed, whether at the time of the weekly inspection or otherwise.

### III. Requirements Applicable for Diesel-Powered Equipment Operated During E-Seam Development.

- (A) Administrative controls shall be developed establishing procedures for planning and communication of activities which are known to result in elevated carbon monoxide levels which do not present a hazard to miners working inby. All persons working in the E-Seam development shall be trained as to the requirements of these administrative controls. In the case of diesel equipment operators, the training shall include diesel discriminating sensor locations so as to minimize false alarms. Diesel equipment operators shall be instructed not to idle machines near sensors. Administrative controls shall be used to minimize the number and type of pieces of diesel equipment in the E-Seam development, to notify a responsible person on the working section when any diesel equipment is operating in the E-Seam development and when welding operations are performed in order to avoid false alert and alarm signals. These administrative controls shall be incorporated into the mine ventilation plan.

- (B) If non-part 36 diesel-powered equipment needs to be "jump started" due to a dead battery in any two-entry system, a methane check by a qualified person using an MSHA approved detector shall be made prior to attaching the "jumper" cables. The equipment shall not be "jump" started if air contains 1.0 volume per centum or more of methane.
- (C) A diesel equipment maintenance program shall be adopted and complied with by the operator. The program shall include the examinations and tests specified in the manufacturer's maintenance recommendations as it pertains to diesel carbon monoxide emissions and items required by paragraph IV. (B). A record of these examinations and tests shall be maintained on the surface and be made available to all interested persons.

#### IV. Implementation and Training Requirements.

- (A) Prior to implementing the modification, an inspection shall be conducted by MSHA to ensure that the terms and conditions of this PDO have been complied with and that the miners have been trained in proper evacuation procedures, including instructions and drills in evacuation and instructions in precautions to be taken for escape through smoke.
- (B) Within 60 days after this PDO becomes final, the Petitioner shall submit proposed revisions for its approved 30 CFR Part 48 training plan to the Coal Mine Safety and Health District Manager. These proposed revisions shall specify initial and refresher training regarding the conditions specified by the PDO. This shall include training on the fire suppression systems used on diesel equipment used in the two-entry system.
- (C) The terms and conditions of this PDO will apply during the time period that appropriate amendments are approved in the ventilation plan. Within 30 days of establishing a return from the E-Seam, into the inner-seam return air shaft, the Petitioner shall file a letter with the Director, Office of Standards,

Regulations, and Variances, Mine Safety and Health Administration, 1100 Wilson Boulevard, Room 2352, Arlington, Virginia, 22209-3939, to have the Petition officially rescinded.

Any party to this action desiring a hearing on this matter must file in accordance with 30 CFR 44.14, within 30 days. The request for hearing must be filed with the Administrator for Coal Mine Safety and Health, 1100 Wilson Boulevard, Arlington, Virginia 22209.

If a hearing is requested, the request shall contain a concise summary of position on the issues of fact or law desired to be raised by the party requesting the hearing, including specific objections to the proposed decision. A party other than Petitioner who has requested a hearing shall also comment upon all issues of fact or law presented in the petition, and any party to this action requesting a hearing may indicate a desired hearing site. If no request for a hearing is filed within 30 days after service thereof, the Decision and Order will become final and must be posted by the operator on the mine bulletin board at the mine.

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John Langton  
Deputy Administrator  
For Coal Mine Safety and Health