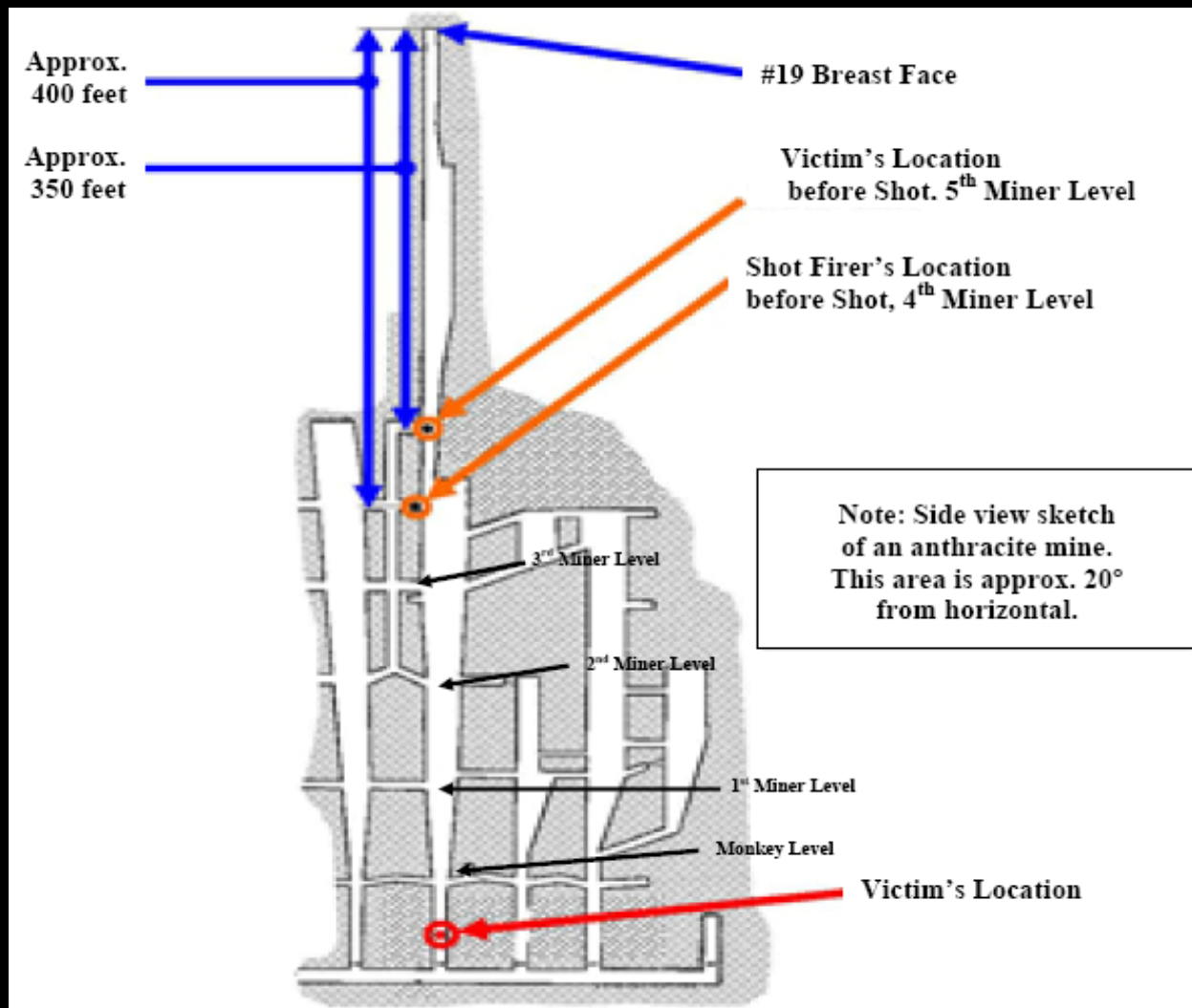


*This presentation is for illustrative and **general** educational purposes only and is not intended to substitute for the official MSHA Investigation Report analysis nor is it intended to provide the sole foundation, if any, for any related enforcement actions.*

GENERAL INFORMATION

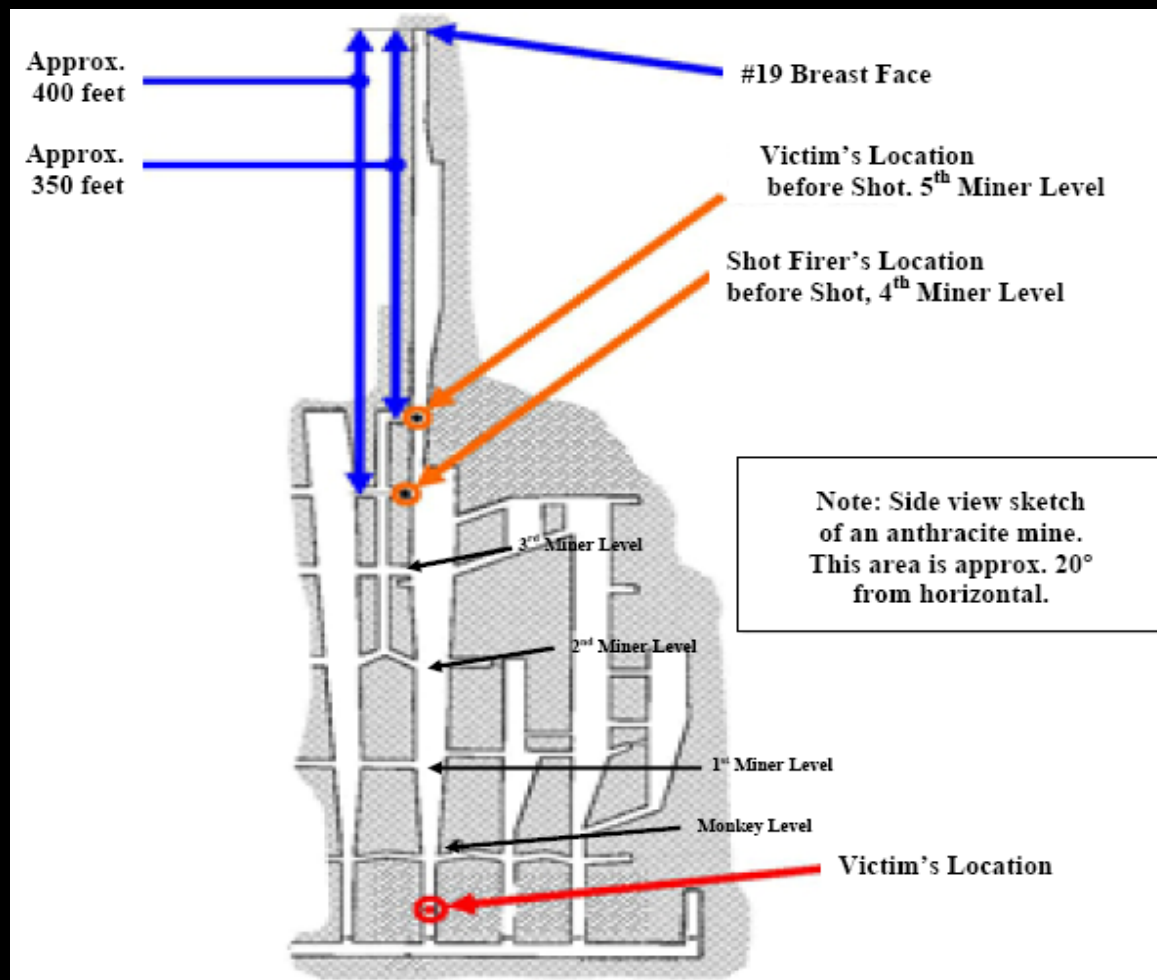
Coal Mine Fatal Accident 2006-42



Operator: R&D Coal Company, Inc.
Mine: R&D Coal Company, Inc. Mine
Accident Date: October 23, 2006
Classification: Fatal Methane Explosion

Location: Dist. 1, Wilkes-Barre, PA
Mine Type: Underground Coal Mine
Employment: 7
Production: 60 Tons/Day

ACCIDENT DESCRIPTION



On Monday, October 23, 2006, a 43-year old miner was fatally injured when a methane explosion occurred, initiated

during an explosives detonation, in the #19 breast on the east side of the mine. The victim was located in the manway of the #19 breast in the vicinity of the 5th miner heading when the explosion occurred. Another miner, located in the 4th miner heading off the #19 breast, had just fired the working face of the #19 breast when the explosion occurred.

ROOT CAUSE ANALYSIS

Root Cause: Miners conducting the blasting activities that led to the fatal accident were not qualified to handle, load or fire explosives.

Corrective Action: The operator should have a procedure to assure that miners are qualified to perform assigned work - such as blasting.

Root Cause: A proper preshift examination designed to identify potential hazards to the miners was not adequately conducted.

Corrective Action: The operator should retrain examiners and establish a procedure to monitor the quality and effectiveness of mine examinations.

Root Cause: Miners that loaded boreholes with explosives did not stem the boreholes in accordance with 30 CFR 75.1322.

Corrective Action: The operator should provide adequate training to qualified miners on proper procedures when working with explosives and loading boreholes with explosives. A management system should be established to assure that lawful and proper blasting procedures are followed.

ROOT CAUSE ANALYSIS cont.

Root Cause: The operator failed to follow the provisions of the ventilation plan approved for the mine.

Corrective Action: The operator should provide a review of the approved ventilation plan as part of the mine annual training program and instruct the miners of any changes to the approved plan before the changes are implemented.

Root Cause: The operator failed to follow the provisions of the roof control plan approved for the mine.

Corrective Action: The operator should provide a review of the approved roof control plan as part of the mine annual training program and instruct the miners of any changes before the changes are implemented.

ROOT CAUSE ANALYSIS cont.

Root Cause: Safe firing procedures were not being complied with in the mine. Shots were fired before miners were located in safe areas.

Corrective Action: The operator should ensure that

- a) those miners who handle explosives are properly trained and qualified in blasting procedures.
- b) a qualified person ascertains that all miners are located safely outby his or her location, and that methane tests are conducted immediately before detonating the shot.
- c) tests are conducted using a blasting multi-meter, galvanometer or other instrument designed specifically for such use.

Root Cause: The mine operator failed to assure that the volume and velocity of the air current in the #19 breast was sufficient to dilute, render harmless and carry away flammable, explosive, noxious and harmful gases.

Corrective Action: The operator should submit a fully revised ventilation plan, containing provisions that guarantee air quantities that will dilute, render harmless and carry away flammable, explosive, noxious and harmful gases. In addition, personnel should be retrained in the requirements and use of gas detectors.

ENFORCEMENT ACTIONS

§104(d) (1) Citation, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.1322(d).

Condition or Practice:

During an on-site investigation of the fatal accident which occurred on October 23, 2006 and interviews with the miners and management in regards to the accident, it was determined that the miners did not stem the 6 boreholes in the face of the #19 breast with at least 24 inches of stemming prior to blasting the boreholes.

ENFORCEMENT ACTIONS cont.

§104(d) (1) Order, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.370(a)(1).

Condition or Practice:

The operator failed to follow the provisions of the ventilation plan approved for the mine on July 6, 1998. Page 9 of the approved plan shows the ventilation current traveling up the right hand side of the breast implementing a blowing system of ventilation to the face of the breast and returning down the left side of the breast. The mine operator was attempting to ventilate the #19 breast with an air fan installed with tubing attached and blowing up the right side of the entry and using line curtain on the left side of the breast for the return air and protective manway which resulted in miners working in return air. An additional air mover was installed 265 feet up the breast to assist the air fan. After the #5 crosscut was developed 485 feet above the gangway, the operator developed a single entry an additional 377 feet. The operator was informed in a meeting at the Shamokin Field Office on October 10, 2006 that he could not develop a single entry to connect two levels. This condition was observed during the rehabilitation of the #19 breast.

ENFORCEMENT ACTIONS cont.

§104(d) (1) Order, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.370(a)(1).

Condition or Practice: continued from slide 8

The face of the #19 breast was ventilated as follows. Line curtain (brattice) was hung to within approximately ten feet of the face of the #19 breast. The brattice was hung close to the left rib, the setup providing an exhaust ventilation situation. An air fan was located approximately 300 feet from the face of the #19 breast closer to the left side. This located the air fan in by the last open crosscut (fifth miner heading). A bazooka was located approximately fifty feet from the face of the #19 breast, closer to the right side. Twelve inch tubing is attached to the bazooka and extends to within approximately twenty feet of the face. The air line for the pneumatic equipment was also used to blow air to the face.

ENFORCEMENT ACTIONS cont.

§104(d) (1) Order, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.220(a)(1).

Condition or Practice:

The operator failed to follow the provisions of the roof control plan approved for the mine on September 7, 2000. The operator developed a single entry 377 feet in the #19 breast above the 5th miner heading. The approved roof control plan requires miner headings to be developed on 30 foot to 65 foot centers. On October 10, 2006, a meeting was held in the Shamokin Field Office with the mine operator with regards to his mine ventilation map. The mine operator was informed at that time that his approved roof control plan does not include any approval for single entry development. The mine superintendent countersigned the preshift report on October 20, 2006. He was aware of the development of the entry without connecting crosscuts on 30 foot to 65 foot centers. The on-shift records for the month of October show that the mine foreman conducted the on-shift examinations in this area and knew the entry was developed in excess of the 30 foot to 65 foot centers without connecting crosscuts. This condition was observed during the rehabilitation of the #19 breast.

ENFORCEMENT ACTIONS cont.

§104(d) (1) Order, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.321(a)(1).

Condition or Practice:

On October 23, 2006, the mine operator failed to assure that the volume and velocity of the air current in the #19 breast was sufficient to dilute, render harmless and carry away flammable, explosive, noxious and harmful gases. Such failure resulted in a methane explosion which resulted in fatal injuries to one miner.

§104(d) (1) Order, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.333(b)(1).

Condition or Practice:

The operator developed an entry more than 600 feet from the center line of the entry from which the entry was developed (monkey - return airway) with temporary ventilation controls. The #19 breast was developed 750 feet from the return airway to the face of the #19 breast. David Himmelberger, President - mine foreman, was informed on October 10, 2006 in a meeting in the Shamokin Field Office that he could not develop the entries more than 600 feet with temporary ventilation controls. This condition was observed during the rehabilitation of the #19 breast.

ENFORCEMENT ACTIONS cont.

§104(a) Citation, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.1325(c)(1).

Condition or Practice:

The firing procedures outlined in this section were not being complied with in the area of the #19 breast. The shot in the #19 breast was fired before a miner was located in a safe area around at least one corner. One miner was in the #19 breast in a straight line with the force of the blast when the shot was fired causing fatal injuries to the miner.

§104(d) (1) Order, was issued to R&D Coal Company Inc., for the violation of 30 CFR 1325(a).

Condition or Practice:

The firing procedures outlined in this section were not being complied with in the area of the #19 breast. The face of the #19 breast was fired by a miner that was not qualified to fire the shot and the victim working with the miner that fired the shot was not qualified. This practice was determined by an examination of the records of qualification issued by Pennsylvania DEP and MSHA.

ENFORCEMENT ACTIONS cont.

§104(a) Citation, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.1325(c)(3).

Condition or Practice:

A proper warning was not given and adequate time was not allowed for miners to respond to the warning before firing a shot in the face of the #19 breast. It was determined during an interview with the miner firing the shot that the only signal given by the victim in the #19 breast was a signal from a cap lamp. The air fan was operating in the breast and the miners could not hear to communicate with each other.

§104(d) (1) Order, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.360(a)(1).

Condition or Practice:

The operator failed to conduct a proper preshift examination of the mine prior to the start of the shift on October 23, 2006.

a. Dates, times and initials could not be found in all areas where miners were required to work or travel on this shift.

b. Presence of methane in the amount of 0.8 percent in an entry developed 34 feet in the monkey without approved curtain was found on the section.

ENFORCEMENT ACTIONS cont.

- c. The line curtain in the #22 breast was not properly installed.
- d. The #19 breast was developed as a single entry from the 5th miner heading to its face, a distance of 377 feet.
- e. Required permanent stoppings were not installed in the monkey or miner headings in the #19 breast.
- f. Line curtain was installed in an exhausting configuration in the #19 breast which was not in accordance with the operator's mine ventilation plan approved on July 6th, 1998.
- g. Line curtain was installed in an exhausting configuration in the #22 breast which is not in accordance with the operator's mine ventilation plan approved on July 6th, 1998.
- h. An air fan and air mover was used in tandem with the line curtain installed in the #19 breast. This arrangement is not in accordance with the operator's mine ventilation plan approved on July 6th, 1998.
- i. There was no entry in the preshift book to verify that the #19 breast was examined.

These conditions were observed during the rehabilitation of the mine and a review of the operator's records following a fatal accident that occurred at this mine on October 23, 2006.

ENFORCEMENT ACTIONS cont.

§104(a) Citation, was issued to R&D Coal Company Inc., for the violation of 30 CFR 75.1318(a).

Condition or Practice:

The boreholes in the face of the #19 breast were loaded by a miner that was not qualified to load the boreholes and was not working in the presence of and under the direction of a qualified person. The two miners in this area were not qualified to load the boreholes. This practice was determined by an examination of the records of qualifications issued by the Pennsylvania DEP and MSHA. The two miners loaded and fired the boreholes, resulting in the death of one of the miners. This is a violation of Section 75.1318(a).

BEST PRACTICES

- Ensure that the face to be blasted and all outby areas are ventilated in accordance with the mine's approved ventilation plan.
- Ensure that explosives are loaded in the presence of and under the direction of a qualified person, and boreholes are stemmed according to 30 CFR 75.1322.
- Ensure that those miners who handle explosives are properly trained in blasting procedures.
- Ensure that a qualified person ascertains that all miners are located safely outby his or her location, and that methane tests are conducted immediately before detonating the shot.
- Ensure that tests are conducted using a blasting multimeter, galvanometer or other instrument designed specifically for such use.