**CAI-2005-05**

**UNITED STATES**
**DEPARTMENT OF LABOR**
**MINE SAFETY AND HEALTH ADMINISTRATION**

# COAL MINE SAFETY AND HEALTH
# REPORT OF INVESTIGATION

**Underground Coal Mine**

**Fatal Powered Haulage Accident**
**May 11, 2005**

**Shoemaker Mine**
**Consolidation Coal Company**
**Dallas, Marshall County, West Virginia**
**ID No. 46-01436**

**Accident Investigators**

**Ronald T. Tulanowski**
**Coal Mine Safety and Health Inspector (Roof Control)**

**Joseph R. Yudasz**
**Coal Mine Safety and Health Inspector (Ventilation)**

**Originating Office**
**Mine Safety and Health Administration**
**District 3**
**604 Cheat Road**
**Morgantown, West Virginia 26508**

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## OVERVIEW

On Wednesday, May 11, 2005, at approximately 1:30 p.m., a 47-year old timberman, with 3 years and 24 weeks mining experience, 1 year and 12 weeks at the mine, was fatally injured when the victim was contacted by the front end of a battery powered Eimco scoop. The scoop was equipped with a "duck bill" attachment and loaded with wedging materials. The victim was last seen by the scoop operator walking approximately 5 to 6 feet ahead of the scoop in the left front area. Just before the accident, the scoop operator looked away from the victim to examine the right coal rib. The victim was crushed and fatally injured beneath the “duck bill” of the scoop.

## GENERAL INFORMATION

The Shoemaker Mine, I.D. 46-01436, is operated by Consolidation Coal Company. The mine, located near Dallas, Marshall County, West Virginia, is accessed by a drift, a slope, and 12 shafts, into the Pittsburgh No. 8 coal seam. Coal is extracted from two continuous miner sections and one longwall section. Coal is transported from the working faces by shuttle cars (continuous miner sections) and by panline (longwall section) to belt conveyors and transferred to mine cars, which carry the coal to the surface. The mine employs 429 persons during three production shifts per day, six days per week, producing an average of 16,365 tons of coal a day.

The principal officers for the mine at the time of the accident were:

| | |
|---|---|
| James Magro | Vice President Operations, River Operation |
| J.W. Latham III | Superintendent |
| Dave Aloia | Assistant Superintendent |
| Ronald Kovalski | Mine Foreman |
| Jim Jack | Safety Supervisor |

The Mine Safety and Health Administration (MSHA) completed its last regular safety and health inspection on March 31, 2005. Another inspection was ongoing at the time of the accident. The Non-Fatal Days Lost (NFDL) incident rate during the previous quarter was 2.28 for this mine, compared to a national NFDL rate of 4.64 for underground mines.

## DESCRIPTION OF ACCIDENT

At the beginning of the day shift on Wednesday, May 11, 2005, William C. Coen, longwall coordinator, instructed three longwall timbermen: Jeffery A. Phillips, Michael W. Young, and Clyde E. Willis (victim), to continue installing Propsetter posts in the No. 1 and No. 2 entries in the headgate side of the 14-A longwall section. The miners arrived at the 14-A longwall section at approximately 9:00 a.m.

As the miners prepared materials for their assignment, the scoop developed a steering problem as Phillips moved it out of the No. 2 entry. Coen instructed Phillips to park the scoop in the No. 1 entry, outby No. 25 crosscut, and use the No. 11 Eimco scoop from the battery charging station (located in the No. 25 right crosscut of the No. 2 entry).

The three timbermen loaded the No. 11 Eimco scoop with the blocking materials. Young, operating the locomotive, moved the supply car to allow the scoop to cross the track at No. 25 crosscut and walked inby in the No. 2 entry to the No. 29 crosscut between the No. 2 to No.1 entries. Willis opened the air lock doors allowing the scoop, being operated by Phillips, to pass through. After the last air lock door was closed, Phillips observed Willis walking five to six feet in front of the left side of the scoop in the No. 1 entry. After passing the No. 27 crosscut, at approximately 1:30 p.m., Phillips glanced at the right rib. The metal grid arrangement of the enclosed operator's compartment necessitated frequent glances at the right rib by Phillips to keep the scoop car in the center of the entry. After checking the right rib, Phillips noticed he could no longer see Willis's light to the left of the machine. He immediately stopped and heard Willis moaning. Phillips backed the scoop up and asked Willis if he was alright. Willis replied that he was hurt. Phillips saw lights inby and started shouting for help and went to assist Willis.

Young was walking in the No. 29 crosscut between the No. 2 and No. 1 entry when he heard Phillips shouting for help. Young ran to the headgate, and asked two roof bolter operators to go to the No. 1 entry to help Phillips. He continued walking outby in the belt entry to No. 27 block and went through the man door in the stopping to the track entry.

He informed Coen, Ronald A. Kovalski, Mine Foreman, and Jack Matkovich, Shift Foreman, all EMT's that Willis was injured and needed help.

Terry L. Hess, Maintenance Foreman, Gary Miller, Mechanic and Douglas Blair, Mechanic were walking through the airlock doors at No. 25 crosscut to the No. 1 entry to assess the steering problem on the No. 192 Eimco scoop. They saw Phillips waving his light, heard him shouting for help and ran to the accident site. Blair (EMT trainee), said Willis was lying on his back with his head one foot from the left rib and his feet pointed towards the scoop. He observed a laceration in the left groin area and a broken tibia above the left ankle and began treatment of the injuries. By this time, additional mine personnel started to arrive at the accident scene.

Charles R. Beaver, Longwall Foreman and EMT, was in the No. 2 entry at No. 30 crosscut when a miner informed him of the accident. He went to the headgate and turned off the power to the longwall face and instructed a crewmember to inform the dispatcher of the accident. He also instructed crewmembers to go with him to the accident site. Beaver and the other crewmembers assisted Blair with first aid, administering oxygen to Willis and placing him on a back board.

Willis was carried to the mantrip in the No. 2 entry outby No. 25 crosscut and placed inside. Kovalski and others attended Willis during transportation to the Golden Ridge portal and to the surface. Willis was transported by Tri State ambulance service to Wheeling Medical Center. He was then flown by helicopter to Allegheny General Hospital, Pittsburgh, Pennsylvania, where he expired during surgery at approximately 8:15 p.m.

## INVESTIGATION OF THE ACCIDENT

On Thursday, May 11, 2005 at 3:55 p.m., the St. Clairsville, Ohio Field Office, received a phone call from Mike Sinozich, Chief Inspector-Safety, Consolidation Coal Company, informing him of a serious machinery accident at the Shoemaker Mine. McGilton issued a 103 (k) Order, to assure the safety of persons. An investigation was conducted at the accident scene by representatives from MSHA, West Virginia Office of Miner's Health, Safety, and Training (WVOMHST), United Mine Workers of America (UMWA), and Consolidation Coal Company.

On May 12, 2005, formal interviews were conducted with seven persons. A list of persons who participated in the investigation can be found in Appendix A.

**DISCUSSION**

# Mining Equipment

**Eimco 585 Scoop**

The Machine involved in the accident was a rubber tire, battery powered Eimco, Model No. 585 scoop, Company No. 11, Serial No. 70550034. The No. 11 scoop was equipped with a "duck bill" front end attachment that is used to haul mine equipment and supplies. The "duck bill" attachment measured 64 inches wide, 94 inches long and could be raised and lowered by the scoop's hydraulic system. The blocking material loaded on the duck bill consisting of wooden cap boards and wedges stacked 32 inches high in the center and 20 inches high on both sides.

A record of the weekly electrical and permissibility examinations for the No. 11 scoop did not indicate any defects or deficiencies. A visual examination and a permissibility examination were conducted on the No. 11 scoop during the investigation and revealed no defects or deficiencies. Operational tests were conducted on the No. 11 scoop during the investigation. No defects or deficiencies pertaining to tramming, steering, brakes, hydraulic system, emergency de-energization device, lights, etc were revealed.
The operator's compartment, was located mid-machine on the right side, and was provided with an approved canopy. A protective metal grid enclosure was provided around the entire operator's compartment, with a hinged door behind the operator's seat. The operator sat in the compartment and faced perpendicular to the direction of travel.

**Accident Scene Information**

The average entry height was 8-feet and the average width was 15.5 feet. The mine floor roadway, in the immediate area, was slightly damp, relatively even, and free of any extraneous material. The entry roadway had minimum rib sloughage along both ribs and was defined by two smooth tire tracks.

**Re-creation of the Accident Conditions**

A re-creation of the conditions and events leading up to the accident was conducted on May12, 2005 at the accident site. The re-creation was conducted by MSHA, WVOMHST investigators, mine management, and representative of miners (UMWA). The scoop was positioned in the No. 1 entry at the accident site with the "duck bill" attachment raised approximately 24-inches off the mine floor. This height was estimated to be the height when tramming based on testimony given during the investigation. The No. 11 scoop was then de-energized. An investigator sat in the operator's compartment while another person, who was wearing clothing similar to that of the victim (without reflective material) was positioned six feet in front of the duck bill on the left side. Only the reflection of the investigator's cap lamp could be seen. As the following images

show, another investigator standing in front of the scoop was only slightly more visible when wearing reflective clothing.

The photo above shows the view from the operator's compartment toward the victim's location. Only the cap lamp of an investigator, standing at the victim's location (indicated by the yellow ellipse), was clearly visible from this view.

The photo above shows the same view from the operator's compartment toward the victim's location. In this case, the investigator standing at the victim's location wore reflective clothing (indicated by the yellow ellipse).

Observations during this re-creation indicated that it would have been difficult to keep track of persons near the scoop.

During the re-creation, a trained scoop operator trammed the scoop. The scoop was timed traveling six feet in 2.33seconds in "high" tram speed.

**Communications**

Witness statements indicated that there was no verbal communication between the victim and the scoop operator as the scoop was trammed in the No. 1 entry from the No. 25 crosscut to the accident site.

**Safety Program**

The company's comprehensive safety program (Safe Work Instructions) generally addressed exercising extreme caution when operating the scoop around persons and generally addressed working around moving equipment. However, the safety program did not specifically prohibit walking or working in front of or in close proximity to mobile rubber tire equipment. Written safety meetings, given during the week of November 1, 2004, did address more specific safety procedures for operating mobile rubber tire equipment around people and working or walking near rubber tire mobile equipment.

## ROOT CAUSE ANALYSIS

A root cause analysis was conducted. The following causal factors were identified:

*Causal Factor:* Procedures, rules, or policies within the operator's comprehensive mine safety program did not ensure that persons remained clear of moving mobile rubber tire equipment.

*Corrective Action:* Mine management modified their comprehensive mine safety program to address the safe location of persons in the vicinity of operating mobile rubber tire equipment. All underground personnel were reinstructed regarding the safe location of persons around operating mobile rubber tire equipment. Management should routinely observe work habits and monitor enforcement of the newly established policies in the comprehensive mine safety program.

## CONCLUSION

The accident occurred because the operator's comprehensive mine safety program did not ensure that persons remained clear of moving mobile rubber tire equipment. The victim was in an unsafe location while walking in the No. 1 entry to the work site. The operator of the scoop did not assure that the victim was positioned in a safe distance from the scoop.

Kevin G. Stricklin
District Manager

8/24/05
Date

## ENFORCEMENT ACTION

**1.** A 103 (k) Order was issued to Consolidation Coal Company on May 11, 2005, to ensure the safety of persons until an investigation of the accident could be completed.

**2.** A 314(b) Notice to Provide Safeguard was issued to Consolidation Coal Company. On May 11, 2005, a miner was fatally injured while working in close proximity to a scoop. The scoop was not operated in a manner which would provide for the safety of persons working in close proximity.

## APPENDIX A
***Persons Participating in the Investigation***

### Consolidation Coal Company

| Name | Title |
|---|---|
| Jim Magro | Vice President |
| Jack Holt | Vice-President Safety |
| Elizabeth Chamberlin | General Manager Safety |
| Mike Sinozich | Chief Inspector-Safety |
| Jim Latham | Mine Superintendent |
| Ron Kovalski | Mine Foreman |
| Tom Skrabak | Shift Foreman |
| Jim Jack | Safety Supervisor |
| William Coen | Longwall Coordinator |
| Andrew Dally | Safety Inspector |
| Helen Churilla | Manager. Clinical Healthcare |

### West Virginia Office of Miners Health, Safety, and Training

| Name | Title |
|---|---|
| Terry Farley | Administrator |
| Brian Mills | Inspector at Large |
| Colin Simmons | District Inspector |
| Alan Landers | Safety Instructor |
| Bennie Comer | Electrical Inspector |

### United Mine Workers of America

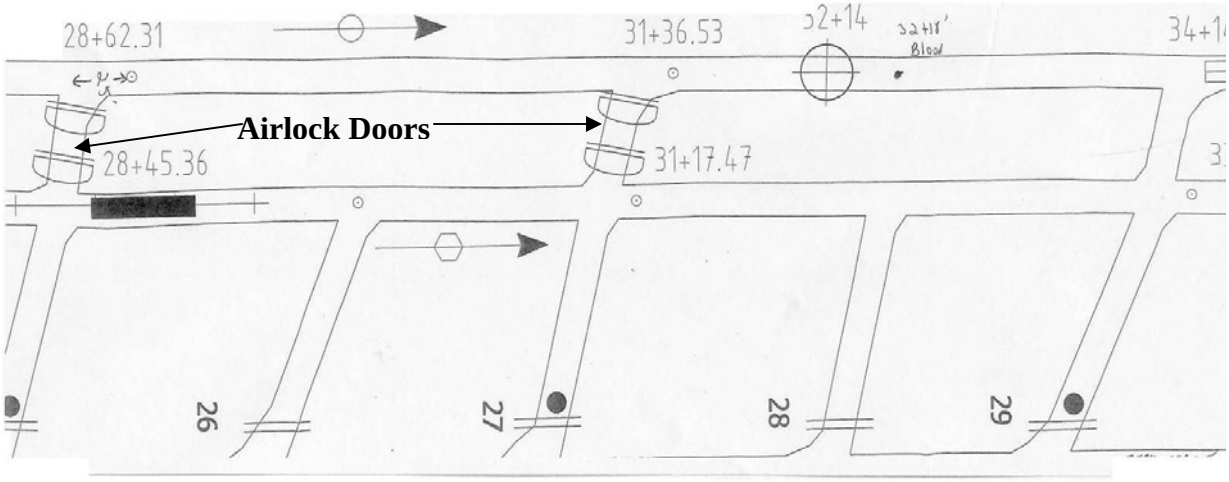
| Name | Title |
|---|---|
| Rich Eddy | International District Vice President |
| Tom Gessler | Chairman Safety committee, Local 1473 |
| John Cumpston | Safety Committee, Local 1437 |
| Cliff Ward | Safety Committee, Local 1437 |
| Roger Fox | Safety Committee, Local 1437 |

**Mine Safety and Health Administration**

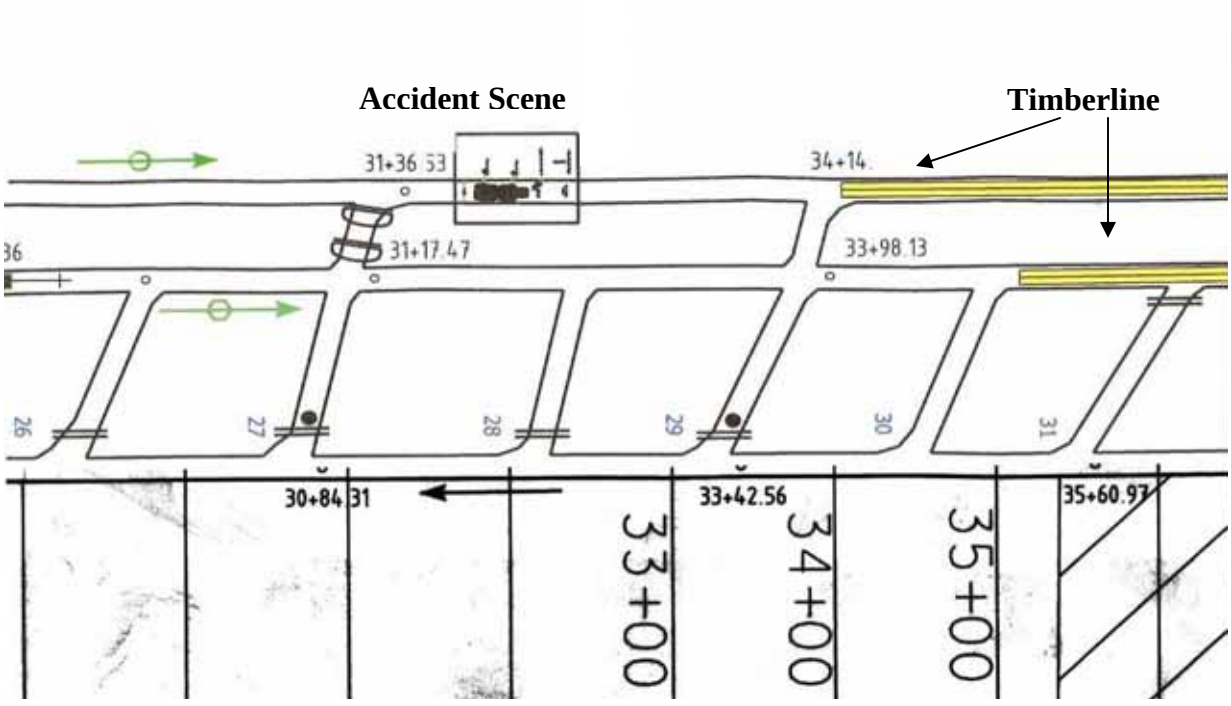
| Name | Title |
|---|---|
| Kevin Stricklin …….. | District Manager |
| William McGilton……... | Supervisory Coal Mine Safety and Health Inspector |
| John Collins…… | Supervisory Coal Mine Safety and Health Inspector |
| Ron Wyatt……... | Supervisory Coal Mine Safety and Health Specialist |
| Joseph Yudasz…… | Coal Mine Safety and Health Inspector |
| Joseph Facello…… | Coal Mine Safety and Health Inspector |
| Ronald Tulanowski……. | Coal Mine Safety and Health Inspector |
| Jerry Vance……. | Training Specialist |

## APPENDIX B

### Drawing Showing Both Sets of Airlock Doors on 14A Longwall Section




### Drawing Showing the Timberline in the No.1 and No. 2 Entries on the 14-A Longwall Section



**APPENDIX C**
**Accident Scene on the 14-A Longwall Section**