

UNITED STATES  
DEPARTMENT OF LABOR  
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION  
Underground Coal Mine

Fatal Machinery Accident  
July 27, 2012

Coal River Mining LLC  
Fork Creek No. 10 Mine  
46-09325

Accident Investigators

Gary Huffman  
Ventilation Specialist/Accident Investigator

Clifton C. Adkins, Sr.  
Electrical Specialist/Accident Investigator

Originating Office  
Mine Safety and Health Administration  
District 4  
100 Bluestone Road  
Mount Hope, West Virginia, 25880

Charles E. Carpenter, District Manager

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## **OVERVIEW**

On July 27, 2012, at approximately 4:20 a.m., Johnny Mack Bryant II, a 35-year-old coal miner from Lenore, West Virginia, was fatally injured while preparing to load the trailing cable onto a Joy 12CM12 continuous mining machine on the No. 2 Section. Mr. Bryant was pinned between the conveyor boom of the machine and the coal rib while the continuous mining machine was being moved.

The accident was caused by failure to follow a provision of the mine's approved roof control plan. The "General Safety Precautions" portion of the approved plan prohibits anyone from being along either side of the continuous mining machine while being moved. The precaution requires the continuous mining machine's pump motor to be de-energized while the trailing cable is being loaded or unloaded.

## **GENERAL INFORMATION**

The Fork Creek No. 10 Mine, ID No. 46-09325, is operated by Coal River Mining, LLC, and is located near Sumerco, Boone County, West Virginia. The underground mine employs 105 persons, including 5 surface personnel. The

mine produces approximately 8,090 tons daily from two continuous mining machine sections.

The mine is operating in the Stockton coal seam which is accessed by six drift openings. The mining height is approximately ten feet. Miners are transported into and out of the mine by battery-powered personnel carriers operated on rail. The mine is ventilated with one main mine fan and does not have a history of methane liberation.

The Principal Officers for the mine at the time of the accident were:

Larry Blackburn .....	Production Manager
Bryon K. Smith.....	Mine Superintendent
Michael Nichols .....	Mine Foreman
Rodney Nelson.....	3rd Shift Mine Foreman
Terry L. Chapman.....	Safety Director

The last regular Safety and Health Inspection conducted by the Mine Safety and Health Administration (MSHA), was completed on June 21, 2012. The Non-Fatal Days Lost (NFDL) injury incidence rate at the mine for 2011 was 4.43, compared to the national NFDL rate of 3.36 for underground mines.

## DESCRIPTION OF THE ACCIDENT

On Thursday, July 26, 2012, at approximately 11:00 p.m., the midnight shift at the Fork Creek No. 10 Mine began their regular shift. Kevin Parsley, Section Foreman, and the No. 2 Section maintenance crew comprised of Jeff Farris, Nick Hensley, James Bryant, Ruban Carroll, Jason Freeman, George Hignite, Brian Ball, Daniel Gillispie, and Johnny Mack Bryant entered the mine and traveled from the surface to the No. 2 Section in the track entry via a battery-powered mantrip.

The crew began the shift by preparing for a belt move which included cleaning and rock dusting the No. 2 Section. Parsley instructed Bryant, Electrician, and Jason Freeman, General Laborer, to move the right roof bolting machine from the 4 left crosscut outby to the No. 3 belt entry to install belt hangers for the belt move. Parsley and Hignite, General Laborer, moved the No. 16 Joy continuous mining machine from the No. 4 face area, down the No. 5 entry, to the first connecting crosscut between the No. 4 and No. 5 entries, one break outby the face area, and parked it in the crosscut adjacent to and approximately 35 feet from Survey Spad No. 1819. The machine was moved to this area so service work could be performed.

Parsley and the general laborers of the crew started lunch at approximately 3:20 a.m., while the electricians turned the power off to the section power center in order to replace an electrical panel for a shuttle car in the section power center. At approximately 3:55 a.m., the power was restored to the section power center and the general labor crew returned to work. Parsley and Bryant traveled to the No. 16 continuous mining machine to move the machine from the 4 right crosscut. Sections of nylon rope, approximately three feet in length, were attached intermittently to the continuous mining machine's cable to aid in pulling slack in the cable. These ropes are looped, or attached, to a hook on the mining machine's boom as needed to pull the cable along as the machine is being moved from place to place.

At approximately 4:11 a.m., after attaching four nylon ropes to the conveyor boom hook, Parsley instructed Bryant that there was one more nylon rope to be attached to the boom (one section of cable slack remained to be picked up). After Parsley moved the continuous mining machine back enough to reach the cable rope, Bryant could attach the rope to the conveyor boom. Parsley instructed Bryant to get in the clear. Bryant then walked away from the area and into the adjacent No. 4 entry through a set of ventilation control curtains. This placed him away from any hazard related to the continuous mining machine and out of the sight of Parsley. Using the remote control transmitter, Parsley began tramming the continuous mining machine, located in the 4 right crosscut, while standing near the cutting head. He moved the machine in reverse toward the ventilation control curtain located in the 4 right crosscut.

During this move, two loops of continuous mining machine cable used to supply electrical power to the continuous mining machine, slid under the continuous mining machine conveyor pan. Parsley briefly stopped tramming the continuous mining machine in order to move the cable from beneath the pan. As he bent over, he inadvertently shut down the continuous mining machine with the remote control. This caused the hydraulic pump motor of the continuous mining machine to de-energize for a very brief period while the cable was moved.

Parsley then restarted the continuous mining machine (at approximately 4:20 a.m.) and resumed moving the machine. Shortly thereafter, as the machine began to move, he heard Bryant faintly yell. Parsley moved to where he could see Bryant and observed that he was pinned between the boom of the continuous mining machine and the coal rib. Parsley immediately moved the continuous mining machine freeing Bryant. Bryant fell to the ground with a nylon rope still in his hand.

Parsley immediately went for help and phoned Rodney Nelson, 3<sup>rd</sup> Shift Mine Foreman, located at the section belt head, and Mark Grigg, Communication Person, located on the surface to inform him of the accident and request that he

call 911. Emergency Medical Technicians (EMT's), Nick Hensley and James Bryant, administered first aid while being assisted by Rodney Nelson, Mine Foreman, and Ruban Carroll, Jeff Farris and Brian Ball, General Laborers. Bryant was administered cardio-pulmonary resuscitation (CPR) and was placed on a back board for transportation. He was taken to the end of the track, placed on a battery powered personnel carrier and immediately transported to the surface. Nelson, Hensley, James Bryant, and Brian Ball traveled to the surface with Bryant. CPR was continuously administered until the ambulance service attended to the victim.

At approximately 4:28 a.m., the Lincoln EMS, Station 20, Unit 44, was dispatched to the Fork Creek #10 Mine. The ambulance service left the mine site with Bryant and was routed to the Thomas Memorial Hospital in Charleston, West Virginia, where he was pronounced dead by the attending physician.

## **INVESTIGATION OF THE ACCIDENT**

On July 27, 2012, at 4:43 a.m., the accident was reported to MSHA's National Call Center by Grigg. At 5:01 a.m., District 4 Assistant District Manager - Technical Division, Joseph Mackowiak, received notification from the call center that a serious accident had occurred at Coal River Mining LLC, Fork Creek No. 10 Mine. At 5:10 a.m., Mackowiak issued a verbal 103(j) Order to Nelson to prevent the destruction of evidence and to preserve the accident scene. MSHA inspectors from District 4 traveled to the accident site, reduced the verbal 103(j) Order to writing and modified it to a 103(k) Order, to insure the safety of persons at this operation. MSHA Technical Support personnel assisted with the examination and function testing of the continuous mining machine.

Interviews were conducted on July 31, 2012, at the Madison MSHA Field Office. Appendix A contains a list of persons who participated in the accident investigation.

## **DISCUSSION**

### **Approved Roof Control Plan**

A provision contained in the "General Safety Precautions" section of the mine's approved roof control plan was not followed and consequently contributed to the fatal accident. Page 5, Item No. 11, of the mine's approved roof control plan states, "When the continuous mining machine is being trammed anywhere in the mine, other than when cutting or loading coal, no person shall be allowed along either side of the continuous mining machine (within the turning radius including the boom)."

On a regular basis, the third shift crew moves mining equipment out of the immediate face area to do additional cleaning and rock dusting on the section. During interviews, Parsley stated that he operates the continuous mining machines about 95% of the time during these equipment moves, while George Hignite operates the continuous mining machines the remainder of the time. Other miners were not used for this task because they had less experience.

Prior to the initial movement of the machine Parsley appropriately directed Bryant to get in the clear. Bryant was observed leaving the immediate area away from any hazard related to the movement of the machine. Parsley inadvertently shutdown the continuous mining machine when he bent over to move the electrical cable. The machine was only de-energized for a brief period and was immediately restarted. Bryant did not signal Parsley or take any actions to announce his presence when he reentered the area near the continuous mining machine.

Parsley did not examine the surroundings of the continuous mining machine before starting and tramping the machine because he had already seen Bryant leave the area as instructed. The electrical cable and inadvertent shut down of the machine diverted Parsley's attention momentarily. Bryant's presence near the continuous mining machine appears to have developed immediately prior to the machine's movement and without warning or prior notification to Parsley. Parsley stated, Bryant was located on one end of the machine and he was on the other which made detecting Bryant difficult.

### **Accident Scene**

The No. 2 Section is located approximately 8,400 feet from the surface on the 1st South East Mains. The accident took place one crosscut outby the face area in the connecting crosscut between the Nos. 4 and 5 entries, approximately 35 feet from the Survey Spad No. 1819 located in the No. 4 entry. This was the first complete crosscut on the new panel setup. The mining height in this area was approximately 10 feet. No notable conditions regarding roof, floor or rib conditions existed in the area. An off-white opaque curtain was located approximately 30 feet from the edge of the right crosscut off of the No. 4 entry. This curtain obstructed the view of persons located on the other side of the curtain. The curtain was in place to provide ventilating air current to the No. 4 entry. A survey of the accident scene is included in Appendix C of this report.

### **Experience and Training**

Bryant had received new miner training and had one year and 14 weeks of total mining experience. His entire mining experience was spent as a belt move crew worker at this mine. An examination of the training records revealed that Bryant

received task training on April 29, 2011 for conveyors, utility, and stoppings. On November 15, 2011, Bryant received task training for operation of the following equipment: Fletcher roof bolting machine, Joy 10 SC Shuttle Car, Fairchild Scoop, and Brookville Mantrip. Bryant received eight hours of annual refresher training on March 24, 2012.

Parsley had 51 weeks experience as a supervisor and a total of 14 years and 27 weeks total underground mining experience. He received task training for the Joy 12CM continuous mining machine on March 15, 2010, and eight hours of annual refresher training on March 24, 2012. He received first aid training for supervisors on June 15, 2012. All training conducted was in accordance with 30 CFR Part 48.

### **No. 16 Continuous Mining Machine**

Frank Prebeg and Justin Daniels, electrical engineers with MSHA Technical Support, examined the No. 16, Joy 12CM12-11, continuous mining machine, Serial No. JM6462. The following is a summary of their findings:

1. Functional testing of the continuous mining machine with the remote box at the accident scene demonstrated that the machine and remote control system functioned properly with no reported or observed problems.
2. Cross activation with the nearest remote box was not a factor.

The continuous mining machine was outfitted with an on-board computerized control system (JNA system) by Joy Mining Machinery. A function of the system includes diagnostic checks of the electrical system. The information from this system was used to determine the machine functions (movement, shutdown, etc.) and to establish a timeline of events.

The continuous mining machine is capable of being retrofitted with a proximity detection system. As a means to prevent a recurrence, the machine was fitted with a Prox 1 proximity detection system on August 18, 2012. The system is capable of monitoring 5 transmitters. The following 5 persons on the section are required to carry the transmitters: two continuous mining machine operators, two roof bolting machine operators, and the section foreman. Maintenance personnel are required to carry the transmitters when the continuous mining machine is operated or trammed from place to place.



## ROOT CAUSE ANALYSIS

A root cause analysis was conducted to identify the cause of the accident. Listed below are the root causes identified during the analysis and the actions implemented to prevent a recurrence of the accident.

*Root Cause:* The victim did not follow the foreman's instruction and returned to the continuous mining machine when it was in use. He returned to the machine without signaling the foreman or taking any actions to announce his presence.

*Corrective Action:* An addendum has been added to the mine's approved Training Plan on August 7, 2012, and training was provided by mine management. The training plan addendum requires the following topics to be taught to the miners:

1. Communication signals: hand, verbal, or light communications.
2. Proper cable handling procedures.
3. Proper positioning of personnel involved while moving the continuous mining machine.
4. The use of safety strobes for miners.
5. The use of clear ventilation controls.
6. Proximity detection system retrofitting and usage.
7. Progressive disciplinary action plans.
8. General outline of the training plan.

Also, an addendum to the Ventilation Plan was submitted and approved on November 8, 2012, which requires the use of clear ventilation control (fly pad) material where equipment travels through the ventilation control.

An addendum to the roof control plan was submitted and approved on October 25, 2012, by the District Manager. The addendum prohibits hanging or removal of cable from the continuous mining machine when the machine is in motion, requires electrical power to be disengaged and positive communication must be acknowledged between the operator and the person(s) hanging or removing the cable. The addendum also defines normal cable handling procedures and operator positioning. The addendum requires safety strobes be worn for all miners on the section and the installation and use of a proximity detection system on the continuous mining machine.

*Root Cause:* The foreman did not examine the surroundings of the continuous mining machine before starting and tramming the machine because he was preoccupied by the continuous mining machine cable and the victim was observed leaving the area.

*Corrective Action:* The continuous mining machine was fitted with a Prox 1 proximity detection system on August 18, 2012. Five persons on the section are required to carry the transmitters: two continuous mining machine operators, two roof bolting machine operators, and the section foreman.

Maintenance personnel are now required to wear the transmitters when the continuous mining machine is being operated or trammed from place to place. An addendum to the roof control plan was submitted and approved on March 19, 2013, by the Acting District Manager. The addendum says, "On miners equipped with the Proximity system, Production and Maintenance personnel will utilize the proximity system when operating or moving the miners."

In addition, the company implemented communication signals and machine usage procedures as described in the previous corrective action.

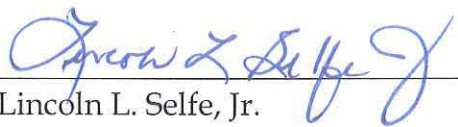
*Root Cause:* The use of opaque ventilation curtains obstructed the vision of the continuous mining machine operator and reduced his sight distance.

*Corrective action:* The ventilation plan revision approved November 8, 2012, requires the use of clear fly pads (transparent curtains) where equipment will tram through the flys (ventilation control). Additionally, the roof control plan revision approved October 25, 2012 requires the use of safety strobes for anyone coming in by the feeder (onto the working section). These changes will increase operator sight distance relative to the position of miners on the section.

## CONCLUSION

The accident occurred because mine management failed to follow the required safety precaution contained within the approved roof control plan. Movement of the continuous mining machine was initiated when a person was alongside the continuous mining machine. The continuous mining machine was capable of being retrofitted with a proximity detection system, but one was not installed by the mine operator. Additionally, the use of partially obstructive (opaque) ventilation curtains reduced the sight distance that persons could be observed while on the mining section.

Approved By:

  
\_\_\_\_\_  
Lincoln L. Selfe, Jr.  
Acting District Manager  
Coal Mine Safety and Health, District 4

3.25.2013  
Date

## ENFORCEMENT ACTIONS

1. Order No. 8125036, was issued over the phone verbally at approximately 5:10 a.m., on July 27, 2012, under the provisions of section 103(j) of the Mine Act which states, an accident occurred at this operation on July 27, 2012, at approximately 4:20 a.m. This Order was issued, under Section 103(j) of the Federal Mine Safety and Health Act of 1977, and later modified to a 103(k) to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all underground activity at the entire mine until MSHA has determined that it is safe to resume normal operations in this area. This Order was initially issued orally to the mine operator at 5:10 a.m., and has now been reduced to writing.

2. Citation No. 8135749, was issued under the provisions of Section 104(a) of the Mine Act, for a violation of 30 CFR 75.220(a)(1) which states, a fatal accident occurred on July 27, 2012 when the approved roof control plan (approved on May 23, 2012) was not being followed. At approximately 4:20 a.m., Johnny Mack Bryant, II, was fatally injured when he was pinned between the moving conveyor boom of the continuous mining machine, (Serial No. JM6462), and the coal rib. A General Safety Precaution contained within the approved plan was not being followed. The precaution, located on Page 5, Item 11, states, "When the continuous mining machine is being trammed anywhere in the mine, other than when cutting or loading coal, no person shall be allowed along either side of the continuous mining machine (within the turning radius including the boom)."

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

**Coal River Mining LLC**

Larry Blackburn.....Production Manager  
Carl Estep .....Maintenance Superintendent  
Eddie Blackburn ..... Assistant Maintenance Superintendent  
B. K. Smith.....Mine Superintendent  
Mike Nichols..... Dayshift Mine Foreman  
Steve Curry ..... Dayshift Chief Electrician

**West Virginia Miner’s Health, Safety and Training**

Eugene White..... Assistant Deputy Director  
John Kinder ..... Inspector-at-Large  
Danny Jarrell..... Assistant Inspector-at-Large  
Fred Newsome..... Roof Control Inspector  
Bill Gillenwater.....General Inspector  
Tim Hughes .....General Inspector

**Mine Safety and Health Administration**

Gary Huffman..... Ventilation Specialist/ Accident Investigator  
Clifton C. Adkins Sr ..... Electrical Specialist/ Accident Investigator  
Joshua McNeely..... Coal Mine Inspector/ Accident Investigator  
Herman Miller ..... Coal Mine Inspector  
Frank J. Prebeg.....Electrical Engineer/Tech Support  
Justin Daniels .....Electrical Engineer/Tech Support

## APPENDIX B Victim Information

Accident Investigation Data - Victim Information

**U.S. Department of Labor**



Event Number: **6 2 9 7 1 6 9**

Mine Safety and Health Administration

<b>Victim Information:</b> 1																			
1. Name of Injured/Ill Employee: <i>Johnny M. Bryant</i>				2. Sex: <i>M</i>		3. Victim's Age: <i>35</i>		4. Last Four Digits of SSN: <i>3265</i>			5. Degree of Injury: <i>01 Fatal</i>								
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 07/27/2012 b. Time: 5:52</i>							7. Date and Time Started: <i>a. Date: 07/26/2012 b. Time: 23:00</i>												
8. Regular Job Title: <i>001 Move Crew</i>				9. Work Activity when Injured: <i>040 Hanging miner cable to conveyor boom</i>				10. Was this work activity part of regular job? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
11. Experience		Years	Weeks	Days	b. Regular		Years	Weeks	Days	c. This		Years	Weeks	Days	d. Total		Years	Weeks	Days
a. This					Job Title:					Mine:					Mining:				
12. What Directly Inflicted Injury or Illness? <i>077 Conveyor Boom Crushing</i>										13. Nature of Injury or Illness: <i>170 Conveyor Boom Crushed chest</i>									
14. Training Deficiencies: Hazard: _____ New/Newly-Employed Experienced Miner: _____ Annual: _____ Task: _____																			
15. Company of Employment: (if different from production operator) <i>Operator</i> Independent Contractor ID: (if applicable)																			
16. On-site Emergency Medical Treatment: Not Applicable: _____ First-Aid: <input checked="" type="checkbox"/> CPR: <input checked="" type="checkbox"/> EMT: <input checked="" type="checkbox"/> Medical Professional: _____ None: _____																			
17. Part 50 Document Control Number: (form 7000-1)							18. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>												

<b>Victim Information:</b>																			
1. Name of Injured/Ill Employee:				2. Sex:		3. Victim's Age:		4. Last Four Digits of SSN:			5. Degree of Injury:								
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:							7. Date and Time Started:												
8. Regular Job Title:				9. Work Activity when Injured:				10. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>											
11. Experience:		Years	Weeks	Days	b. Regular		Years	Weeks	Days	c. This		Years	Weeks	Days	d. Total		Years	Weeks	Days
a. This					Job Title:					Mine:					Mining:				
12. What Directly Inflicted Injury or Illness?										13. Nature of Injury or Illness:									
14. Training Deficiencies: Hazard: _____ New/Newly-Employed Experienced Miner: _____ Annual: _____ Task: _____																			
15. Company of Employment: (if different from production operator) Independent Contractor ID: (if applicable)																			
16. On-site Emergency Medical Treatment: Not Applicable: _____ First-Aid: _____ CPR: _____ EMT: _____ Medical Professional: _____ None: _____																			
17. Part 50 Document Control Number: (form 7000-1)							18. Union Affiliation of Victim:												

<b>Victim Information:</b>																			
1. Name of Injured/Ill Employee:				2. Sex:		3. Victim's Age:		4. Last Four Digits of SSN:			5. Degree of Injury:								
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:							7. Date and Time Started:												
8. Regular Job Title:				9. Work Activity when Injured:				10. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>											
11. Experience:		Years	Weeks	Days	b. Regular		Years	Weeks	Days	c. This		Years	Weeks	Days	d. Total		Years	Weeks	Days
a. This					Job Title:					Mine:					Mining:				
12. What Directly Inflicted Injury or Illness?										13. Nature of Injury or Illness:									
14. Training Deficiencies: Hazard: _____ New/Newly-Employed Experienced Miner: _____ Annual: _____ Task: _____																			
15. Company of Employment: (if different from production operator) Independent Contractor ID: (if applicable)																			
16. On-site Emergency Medical Treatment: Not Applicable: _____ First-Aid: _____ CPR: _____ EMT: _____ Medical Professional: _____ None: _____																			
17. Part 50 Document Control Number: (form 7000-1)							18. Union Affiliation of Victim:												

APPENDIX C  
Sketch of the Accident Scene

