

**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  
October 20, 2007**

**Pleasant Hill Mine  
Carter Roag Coal Company  
Mabie, Randolph County, West Virginia  
ID No. 46-08194**

**Accident Investigators**

**Joshua R. Brady  
Mechanical Engineer**

**William L. Sperry  
Coal Mine Safety and Health Inspector**

**Jason Rinehart  
Industrial Hygienist**

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

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**PHOTO OF ACCIDENT SCENE**



## OVERVIEW

On Saturday, October 20, 2007, an electrician, Howard “Tim” Harris was fatally injured when he apparently fell onto the mobile bridge carrier dolly which mounts onto the Lo-Lo belt. The victim was traveling along the tight side of the Lo-Lo belt to retrieve his multimeter, (located on the opposite side of the belt) at the time of the accident. The operator did not have any written plans, policies, or procedures established to prevent miners from traveling along the tight side of the Lo-Lo belt.

## GENERAL INFORMATION

The Pleasant Hill Mine is an underground coal mine, owned and operated by the Carter Roag Coal Company which is a subsidiary of the United Coal Company. The Mine is located at Mill Creek, in Randolph County, West Virginia. Coal is mined from the 38 inch thick Sewell coal seam by two advancing continuous mining machine sections.

The Pleasant Hill Mine employs 105 underground workers, 17 surface employees, and 9 other employees. The average production is approximately 1,000 tons per day. The mine typically operates nine hour shifts, two shifts a day. Maintenance of equipment is conducted on the midnight shift. Coal is removed from the mine by a belt conveyor system. Rubber-tired and battery-powered haulage equipment is used to transport men and materials underground. The mine is accessed by 5 drift openings.

The principal officers at the time of the accident were:

Keith Hargrove	President and General Manager, Carter Roag Coal Company
Ken McCoy	Vice President, United Coal Company
John Schroder	Mine Manager, Carter Roag Coal Company
Norman Hill	Mine Superintendent, Carter Roag Coal Company

An MSHA Safety and Health Inspection (E01) was completed on September 27, 2007, and another inspection was ongoing at the time of the accident. The national Non-Fatal Days Lost (NFDL) incident rate for the second quarter 2007 for the underground mines was 4.68 and was 0.0 for this mine.

## DESCRIPTION OF ACCIDENT

On Saturday, October 20, 2007, at approximately 4:00 p.m., the production crew under the supervision of Luke Pugh, Section Foreman entered the mine and traveled to the 1<sup>st</sup> Right A Panel Section. Upon their arrival, Kelvin Summerfield, Continuous Mining Machine Operator, cleaned up a previously mined cut (day shift) in the Number 6 Heading. The mobile bridge

conveyors were operated by Doyle Davis, Number 4-Bridge Operator; Philip Holcomb, Number 3-Bridge Operator; Mike Matlick Number 2-Bridge Operator; and Robert Fredrick, Number 1-Bridge Operator. Summerfield stated that during the clean-up process, the continuous miner the circuit breaker serving the continuous miner would trip when he attempted to start the continuous miner. The continuous miner was backed out of the Number 6 Heading and power was removed. Harris observed and repaired a damaged portion in the miner cable located an estimated 100 feet from the machine. Randall Mullens, Electrical Supervisor, arrived on the working section while Harris was in the process of completing the cable repair. Mullens assisted Holcomb in tightening the conveyor chain in the Number 3-Bridge Unit. The power was restored to the continuous mining machine. The miner operator then began mining in the crosscut, near Survey Station 4006, between the Number 6 and Number 7 Headings.

While mining in the crosscut the continuous miner again began tripping the circuit breaker. Davis contacted Harris via radio and informed him of the problem. Harris and Mullens were located at Harris's vehicle in a crosscut between the Number 3 and Number 4 Entries.

According to Mullens, Harris traveled to the section power center to reset the circuit breaker. Meanwhile Mullens traveled to the Number 4-Bridge. Mullens arrived in the area of the Number 4-Bridge and continuous miner. Summerfield informed Mullens that the continuous miner circuit breaker continued to trip. Mullens crawled to the section power center and found that the circuit breaker was tripped. Mullens instructed Harris not to reset the circuit breaker. Harris then radioed to request his multimeter and tools. The mobile bridge operators began backing up the mobile bridges to allow the vehicle with tools and equipment to travel across the section. Mullens stated that after a short wait, Harris decided to retrieve the multimeter and tools himself, and departed the section power center. Harris traveled inby and through the crosscut toward the Number 4 Entry where the conveyor system is located.

Fredrick stated he reversed the Number 1-Bridge an estimated eight to ten feet when he heard someone shout; turned around and observed Harris in between the belt and the dolly. Frederick immediately activated the emergency stop on his mobile conveyor unit. The victim was removed from the location where he became entangled and placed on a stretcher. CPR was started, and continued during transport to the awaiting ambulance on the surface. He was pronounced dead on arrival at the hospital.

## **INVESTIGATION OF ACCIDENT**

On Saturday, October 20, 2007 at approximately 6:31 p.m., MSHA was notified by Data Trac that a potentially fatal accident had occurred at the Pleasant Hill Mine. Greg Fetty, Staff Assistant, verbally issued a 103(k) order to ensure the safety and health of miners until an investigation of the accident could be completed. Joshua R. Brady, Mechanical Engineer, and Jason Rinehart, Industrial Hygienist were assigned to investigate the accident. William L. Sperry, Coal Mine Safety and Health Specialist was later assigned to assist with the investigation.

The investigation was initiated on October 21, 2007, and conducted in cooperation with the West Virginia Office of Miners' Health, Safety, and Training (WVMHST) and with the assistance of the operator and their employees. Those persons who participated or were present during the investigation are listed in Appendix A of this report. Representatives of MSHA, WVMHST, the operator, and a representative of miners traveled to the underground accident site to examine the scene and begin an investigation of existing physical conditions. Digital photographs and relevant measurements were taken. Sketches and a survey were conducted of the site.

Interviews with persons who had knowledge of the accident were conducted on October 22, 2007, at the Star Bridge Preparation Plant, located near Helvatia, Randolph County, West Virginia. The interviews revealed there were no eye witnesses to the accident. The electrical components of the bridge system and continuous miner were tested and examined on October 25, 2007, which concluded the physical portion of the investigation. The investigation also included a review of training records and examination records.

## **DISCUSSION**

Continuous haulage systems are commonly referred to in the mining industry as mobile bridge conveyors. These commonly consist of a series of mobile bridge carriers and chain bridge conveyors. The continuous miner loads coal directly onto the Number 4-Mobile Bridge Conveyor which is the most inby unit. The Number 1-Mobile Bridge is the most outby unit and is connected to the discharge from the mobile bridge carrier dolly which travels over the Lo-Lo belt. Coal is transferred from bridge to bridge in the outby direction where it is dumped onto the conveyor belt.

All of the disabling devices on all four mobile bridge conveyor units functioned properly when tested. Each mobile bridge was also equipped with a voice communication system consisting of headphones with microphones. The communication system was limited to the bridge operators only. The Number 4-Bridge Operator maintained a separate radio to communicate with other radio carriers on the section. All communication devices functioned properly when tested. The average height in the area of the Number 1-Mobile Bridge Operator was 48 inches. A pinch point existed where the mobile bridge carrier dolly attached to the Lo-Lo belt. The center of the Lo-Lo belt to the dolly frame was 10 inches at this location. The victim was caught in this area. Additionally, the distance from the solid rib to the mobile dolly was three feet six inches from the tight side coal rib at the accident scene and was not a contributory factor to the cause of the accident. See Appendix B for a scale drawing of the accident scene.

A review of the victim training records was conducted. Harris was an experienced miner with approximately 21 years total mining experience at numerous mining operations but little or no previous experience with continuous haulage systems. Harris had been a qualified mine electrician since 2005. Harris had less than two weeks experience at this mine.

## ROOT CAUSE ANALYSIS

An analysis was conducted to identify the most basic cause of the accident and how to prevent a reoccurrence of a similar accident.

**Root Cause:** The operator's informal procedures, which prohibited miners from working or traveling along the tight side of the Lo-Lo belt on the inby side of mobile dolly structure, were not followed.

**Corrective Action:** The operator conducted additional training and developed written instructions for all miners assigned to the continuous haulage section. This training and instruction is specific so that all miners understand not to travel on the tight side of the belt on the inby side of the mobile dolly structure while it is in operation. Safeguard 7143460 was issued on October 25, 2007, prohibiting persons in this area while the belt is in motion.

**Root Cause:** The operator's standards, policies, and administrative controls were incomplete and insufficient. There were no written standard operating procedures, the topic was not reduced to writing in the Training Plan, there were no signs warning against traveling in this area, nor any other means to stop this action by miners working on this section.

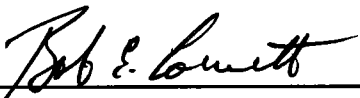
**Corrective Action:** The operator implemented new training and instruction guidelines to insure that training for all miners working on a mobile bridge sections will be documented on MSHA 5000-23 forms. The records and signed forms will ensure that the proper training has been completed. The training plan was revised and upgraded. The operator installed physical barriers in the crosscuts and warning signs were posted to remind all miners to stay out of this area.

**Root Cause:** The operator's written training program did not address training for miners traveling on the tight side of the Lo-Lo belt on the inby side the mobile bridge dolly structure while this equipment was in use.

**Corrective Action:** The operator's revised training procedures include specific training to instruct miners that traveling on the tight side of the Lo-Lo belt inby the Mobile Dolly structure is not permitted. Prior to working on mobile bridge sections, all miners will be trained not to work or travel on the tight side of the Lo-Lo structure inby the dolly while the belt is in motion. New miners will have specific training related to working safely on mobile bridge sections. Safeguard 7143460 was issued on October 25, 2007 to prohibit persons in this area.

### CONCLUSION

While traveling along the tight side of the Lo-Lo belt, the electrician was fatally injured when he apparently fell onto the mobile bridge carrier dolly that mounts onto the Lo-Lo belt. The victim was dragged under the mobile bridge carrier dolly. The operator had no written plans, policies, procedures or administrative controls to prevent miners from traveling along the tight side of the Lo-Lo belt.

  
\_\_\_\_\_  
Bob E. Cornett  
District Manager

1-28-08  
\_\_\_\_\_  
Date



## **ENFORCEMENT ACTIONS**

1. A 103 (k) Order No. 6604885 was issued to assure the safety of the miners.
2. Safeguard No. 7143460 issued under 314(b) requiring the placement of warning signs and off switches along the Lo-Lo belt and not to allow any work or travel on either side of the conveyor belt located between the mobile bridge carrier dolly and the section tail roller while the belt is in motion.

**APPENDIX A**  
List of Persons Participating in Investigation

Listed below are the persons furnishing information and/or present during the investigation:

**MINING COMPANY OFFICIALS**

Keith Hargrove	President and General Manager, Carter Roag Coal Company
Ken McCoy	Vice President, United Coal Company
John Schroder	Mine Manager, Carter Roag Coal Company
Norman Hill	Mine Superintendent, Carter Roag Coal Company
Brad Phillips	Mine Manager, Carter Roag Coal Company
Ron Patterson	Manager of Engineering, United Coal Company
Eddie Taylor	Maintenance Superintendent, Carter Roag Coal Company
Don Jones	Director Emergency Responses & Compliance, United Coal Company
Bill Currence	Safety Director
Randall Mullens	Electrical Supervisor
Rick Gear	Afternoon Shift Mine Foreman, Carter Roag Coal Company
Luke Pugh	Section Foreman, 1 <sup>st</sup> Right A Panel
Kenny Kelley	Surveyor, Carter Roag Coal Company
Chris Smith	Surveyor, Carter Roag Coal Company
Robert H. Beatty, Jr.,	Dinsmore & Shohl LLP, Company Legal Counsel

**MINING COMPANY EMPLOYEES**

Robert Fredrick	Number 1 Bridge Operator
Mike Matlick	Number 2 Bridge Operator
Philip Holcomb	Number 3 Bridge Operator
Doyle Davis	Number 4 Bridge Operator
Clifton Kerns	Roof Bolter
Steve Smith	General Labor
Kelvin Summerfield	Miner Operator

**REPRESENTATIVES OF THE MINERS**

Mike Matlick

**WEST VIRGINIA OFFICE of MINERS' HEALTH , SAFETY, and TRAINING  
(WVMHST)**

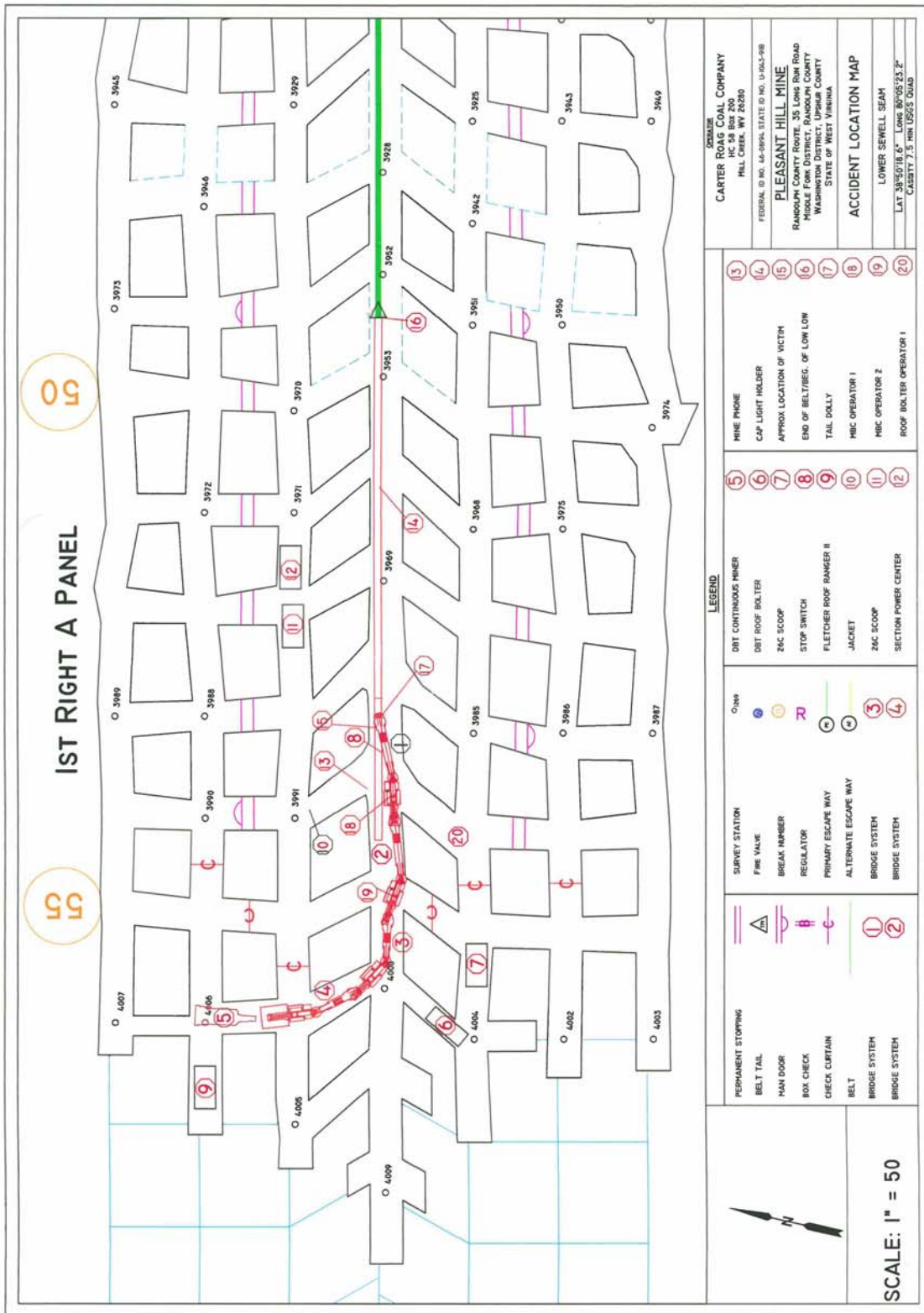
Alan Landers	Inspector at Large
John Meadows	Assistant Inspector
George Smallridge	Inspector
John Scott	Inspector (Electrical)

**MINE SAFETY and HEALTH ADMINISTRATION**

Joshua R. Brady	Mechanical Engineer (Roof Control)
Jason Rinehart	Industrial Hygienist
William L. Sperry	Coal Mine Safety and Health Specialist (Electrical)
Jerry W. Vance	Educational Field Services

# APPENDIX B

## Scale Drawing of the Accident Scene



## APPENDIX C Victim Data Sheet

### Accident Investigation Data - Victim Information

**U.S. Department of Labor**  
Mine Safety and Health Administration



Event Number:

<b>Victim Information: 1</b>											
1. Name of Injured/Ill Employee: <i>Haward T. Harris</i>			2. Sex: <i>M</i>	3. Victim's Age: <i>54</i>		4. Last Four Digits of SSN: <i>0011</i>			5. Degree of Injury: <i>01 Fatal</i>		
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 10/20/2007 b. Time: 18:30</i>						7. Date and Time Started: <i>a. Date: 10/20/2007 b. Time: 16:00</i>					
8. Regular Job Title: <i>002 Electrician</i>				9. Work Activity when Injured: <i>020 Electrician</i>				10. Was this work activity part of regular job? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
11. Experience a. This			b. Regular			c. This			d. Total		
Years	Weeks	Days	Years	Weeks	Days	Years	Weeks	Days	Years	Weeks	Days
<i>2</i>	<i>12</i>	<i>0</i>	<i>2</i>	<i>12</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>21</i>	<i>0</i>	<i>0</i>
12. What Directly Inflicted Injury or Illness? <i>035 Belt Conveyor/Mobile Bridge Conveyor</i>						13. Nature of Injury or Illness: <i>170 Crushing injuries</i>					
14. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input checked="" type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>											
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: <input type="checkbox"/> First-Aid: <input type="checkbox"/> CPR: <input checked="" type="checkbox"/> EMT: <input checked="" type="checkbox"/> Medical Professional: <input type="checkbox"/> None: <input type="checkbox"/>											
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: a. This			b. Regular			c. This			d. Total		
Years	Weeks	Days	Years	Weeks	Days	Years	Week	Days	Years	Weeks	Days
12. What Directly Inflicted Injury or Illness?						13. Nature of Injury or Illness:					
14. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>											
15. Company of Employment: (If different from production operator)						Independent Contractor ID: (if applicable)					
16. On-site Emergency Medical Treatment: Not Applicable: <input type="checkbox"/> First-Aid: <input type="checkbox"/> CPR: <input type="checkbox"/> EMT: <input type="checkbox"/> Medical Professional: <input type="checkbox"/> None: <input type="checkbox"/>											
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: a. This			b. Regular			c. This			d. Total		
Years	Weeks	Days	Years	Weeks	Days	Years	Week	Days	Years	Weeks	Days
12. What Directly Inflicted Injury or Illness?						13. Nature of Injury or Illness:					
14. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>											
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