

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
August 25, 2017

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

Accident Investigators

Joedy N. Gutta, P.E. – Civil Engineer
Coal Mine Safety and Health Specialist, Impoundments

Tyler Peddicord
Coal Mine Safety and Health Specialist, Ventilation

Originating Office –
Mine Safety and Health Administration
District 3
604 Cheat Road, Morgantown, West Virginia 26508
Carlos T. Mosley, District Manager

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OVERVIEW

On Friday August 25, 2017, at approximately 12:08 p.m., Owen Jones, a 51-year-old mine examiner with over 27 years of mining experience fell onto a moving conveyor belt and received fatal injuries. Jones was attempting to cross the conveyor belt to complete his examination of the belt when he fell.

The fatal accident occurred because the crossover provided by the operator was not suitable for Jones and other miners to use as a means to cross over the belt when it was moving. In addition, the operator had not installed a guard to prevent Jones from crossing over the conveyor belt in an unsafe manner.

GENERAL INFORMATION

The Pleasant Hill Mine, an underground mine in the Sewell coal seam, is located near Mill Creek in Randolph County, West Virginia. It is operated by the Carter Roag Coal Company. The mine employs 192 persons, 156 underground. The mine operates two production shifts and one maintenance shift five days a week. The mine produces 1,968 tons of raw coal daily from two continuous mining machine sections. A conveyor system transports coal from the sections to the surface through one of the six drift openings. An elevator is used to transport miners in and out of the mine. The mine is ventilated with a blowing fan. The mine liberates over 1.2 million cubic feet of methane

in a 24-hour period and is on a five day spot inspection schedule in accordance with Section 103(i) of the Mine Act.

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

Chris Couch.....	Mine Manager
Fred Watson.....	General Mine Foreman
Brad Summerfield.....	Production Superintendent
Curtis Bailey.....	Production Superintendent
Kelvin Napier.....	Safety Manager

At the time of the accident, a regular (E01) safety and health inspection was in progress. The previous E01 inspection was completed on June 28, 2017. The non-fatal days lost (NFDL) injury incidence rate for the Pleasant Hill Mine for 2016 was 3.36 compared to the national NFDL rate of 3.24 for mines of this type.

DESCRIPTION OF ACCIDENT

On Friday, August 25, 2017, Owen Jones started his shift at 6:30 a.m. He traveled in a battery-powered mantrip to Zone 2, his usual work area, to clean, perform maintenance, and correct problems on the conveyor belts. Jones then traveled to Zone 1 to conduct examinations. Jones did not typically work in that area but was assigned to it that day by Mine Foreman Fred Watson because the regular Zone 1 examiner was absent.

Jones wrote the first date, time, and initials (DTI) on a date board at 11:30 a.m. at the No. 3 belt transfer. He then proceeded to examine Zone 1, by driving the mantrip along the No. 2 conveyor belt. The belt is installed so the distance on one side to the coal rib is wider than the other side (wide side). Jones drove on the wide side and parked so he could examine the No. 2 transfer. He placed his DTI on the wide side date board at 11:58 a.m. A date board present on the other side (tight side) of the transfer did not have any DTI from him that day.

There were no witnesses to the accident. However, the mine tracking system and other evidence gathered during the investigation indicate that Jones fell onto the moving conveyor belt as he attempted to cross the belt while it was moving. A wooden crossover structure was located 10 feet away. There was no evidence to indicate that miners were using it.

James Yoakum, Outside Yard Man, was checking the conveyor belt for spillage shortly after 2:00 p.m. when he discovered Jones on the ground under the canopy at the pit mouth (see Appendix A). Yoakum yelled for Jonathan Sexton and Matthew Ison, Contract Utility Miners working in the yard, to help. Sexton traveled to Jones and was

unable to detect a pulse. Yoakum went to the mine phone and called Thomas Lindsay, Dispatcher, to tell him he needed help because a man was down. Lindsay called Roger Debar, Warehouse Manager, who called 911 at 2:12 p.m.

Several individuals, including emergency medical technicians (EMT), immediately responded to the accident. The EMTs confirmed Jones had no pulse and determined no first aid would be performed due to the extent of his injuries. Couch and Bailey, who had also traveled to the scene, placed Jones on a back board.

The Randolph County Emergency Squad arrived on the scene at 2:42 p.m. Dr. Hundley at the WVU Medical Command, pronounced Jones dead at 2:51 p.m. after he consulted with the squad. The squad then transported Jones via ambulance to the Davis Medical Center in Elkins, West Virginia.

INVESTIGATION OF ACCIDENT

The Department of Labor (DOL) National Contact Center was notified of the accident on August 25, 2017, at 2:19 p.m. The DOL Contact Center notified Michael Stark, Staff Assistant in the Morgantown District Office who then notified the mine operator of its obligation to preserve the accident scene and that an investigator was traveling to the mine. Stark assigned Joedy Gutta, Coal Mine Safety & Health Specialist - Impoundments, and Tyler Peddicord, Coal Mine Safety & Health Specialist - Ventilation, to investigate the accident. Steven Stankus, Supervisory Coal Mine Safety and Health Inspector, traveled to the site and verbally issued a 103(k) order upon arrival.

The accident investigation was conducted in conjunction with the West Virginia Office of Miners Health Safety and Training (WVOMHST) and the Carter Roag Coal Company. Before going underground, the team conducted preliminary interviews with persons having knowledge of the facts and circumstances concerning the accident.

Investigators took photographs of the equipment and accident site (see Appendix B). A survey crew developed sketches of the pit mouth area where Jones was found and of the No. 2 belt transfer area (see Appendix C).

MSHA and WVOMHST conducted formal interviews on August 29, 2017, at the MSHA District 3 Bridgeport Field Office. A list of persons interviewed and participating in the accident investigation is in appendix D.

DISCUSSION

Accident Site

The accident site was identified by the parked mantrip Jones had been operating, the mine tracking system, and the physical evidence present at the No. 2 belt transfer point.

WVOMHST conducted tests for stray electrical currents in the area. None were identified. The conveyor belt start and stop switches provided at the No. 2 belt transfer were also tested and found to function properly.

Mine Examination Practices

The belt examiners utilize three-wheeled battery-operated mantrips to conduct the majority of the conveyor belt line examinations. They travel along the wide side of the conveyor belt. Crossovers are provided at locations where it is necessary to cross over the conveyor belt and examine the tight side of the belt. It is a mine practice for the examiners to examine both sides of the belt at transfer points and record their DTI at those locations.

Mine Tracking System

The mine utilizes an MSHA approved tracking system manufactured by Matrix Design Group, LLC. The system utilizes transmitters called “tags” attached to miners’ hard hats, and these “tags” transmit an electromagnetic signal approximately every two seconds. Antennae throughout the mine receive the signal and communicate the location of the tag (and the miner) to a system computer. The system makes a log of miners’ locations.

The tracking system log shows Jones was at No. 2 belt transfer point in Zone 1 at 11:54 a.m. At 11:57 a.m, he was located at No. 32 block on No. 1 conveyor belt, a distance of approximately 1,625 feet. At 11:59 a.m., he was located at No. 2 block. This information is consistent with the speed of the conveyor belt and also indicates the accident occurred at the No. 2 transfer point. The system log shows that his tracker was outside the mine in the yard at 12:06 p.m.

The investigation team examined the tracking system due to the time discrepancies on the date board and the times logged in the system for Jones’ locations. The tracking system clock was found to be approximately 14 minutes behind eastern daylight time.

No. 2 Belt Transfer

The No. 2 belt transfer was constructed with flat steel covers over both sides of the conveyor belt (see photos in Appendix B). The covers are approximately 32 inches above the mine floor. The opening between the covers, where the conveyor belt is exposed, measures 29 inches. Steel skirt boards extend vertically four and a half inches above both covers along the opening. The average clearance between the flat covers

and the mine roof is 58 inches. Mined material leaves the No. 2 conveyor belt at a belt discharge roller located inside a steel chute with angled deflector walls. This steel chute, called a "rock box," funnels the material onto the No. 1 conveyor belt.

Footprints were detected in the rock dust on the flat covers at the No. 2 transfer point. Handprints were found on the angled deflector on the tight side of the rock box. Vertical streaking marks were in the dust on the inside and outside of this angled deflector measuring 25 inches in length. The evidence indicates Jones was utilizing the outby side of the No. 2 transfer to cross over the moving No. 1 conveyor belt to travel to the tight side of the conveyor belt. Investigators believe the streaking marks were made by Jones as he fell onto the conveyor belt.

Crossover

The crossover located 10 feet from where Jones fell onto the belt was constructed approximately 6 months before the fatal accident. The vertical support members were six inch by six inch timbers wedged to the mine roof. The floor and sides were one inch thick boards. The crossover was 27 inches wide and 74 inches across the conveyor belt. The floor boards were an average of 46.5 inches above the mine floor, leaving only 34 inches to 37 inches of clearance to the mine roof.

The dimensions of the crossover made it difficult to use. A miner would not have enough width to turn on top of the crossover and climb down feet first. Evidence gathered by investigators showed that it was not being used by miners, including mine examiners. Thick rock dust was evenly deposited and undisturbed on the crossover. If miners had used the crossover, the rock dust would have been disturbed.

The distance from the coal on the conveyor belt to the bottom of the crossover was approximately six inches. Investigators identified locations along the No. 1 conveyor belt where Jones contacted the crossover and mine roof while he was on the conveyor belt. Jones was found lying face down under the canopy at the pit mouth. A hold down roller installed near this location may have expelled Jones from the conveyor belt.

Previous Safeguard

On May 25, 2010, an inspector attempted to use a crossover to cross the No. 1 belt while the belt was moving. A portion of the crossover broke and created an opening that a person could fall through. The inspector issued a notice to provide a safeguard requiring suitable crossing facilities in the mine where it is necessary for miners to cross moving conveyor belts.

General Machine Information

The conveyor belt involved in the accident is a Firewall II manufactured by Cobra America. The No. 1 conveyor belt line is 60 blocks long. It exits the mine from the number four pit mouth entry and dumps onto the outside stacker belt. The conveyor

belt is 48 inches wide. The No. 1 conveyor belt structure hangs from the mine roof with metal chains from the pit mouth to the 33 block. The conveyor belt structure is on the mine floor from the 33 block to the 57 block. Conveyor belt start and stop switches are located every 1,000 feet along the conveyor belts and at the No. 2 belt transfer.

Training Records

William K. Roberts, MSHA Training Specialist, reviewed the training records. Jones had been employed at this mine since March 20, 2016. He had 27 years of mining experience and his last annual refresher training was conducted on February 16, 2017. He had also received task training on various tasks and the training was up to date. Five non-contributory training citations were issued for violations of 30 CFR 48.9 (a) because the training forms were not completed properly.

ROOT CAUSE ANALYSIS

MSHA conducted an analysis to identify the most basic causes of the accident that were correctable through reasonable management controls. Root causes was identified that, if eliminated, would have either prevented the accident or mitigated its consequences.

Listed below is the root causes identified during the investigation and the operator's implemented corrective actions to prevent a recurrence of this type of accident.

1. Root Cause: The mine operator did not provide an adequate crossover outby the No. 2 belt drive for miners to safely cross the moving No. 1 conveyor belt.

Corrective Action: The mine operator removed the crossover and constructed an adequate crossover for miners to use (see Appendix F).

2. Root Cause: The configuration of the drive on the outby side of the rock box was not constructed to prevent a miner from using it as means to cross the moving conveyor belt.

Corrective Action: The mine operator installed guards at certain belt transfer locations to prevent miners from using them as a means to cross a moving conveyor belt.

CONCLUSION

On August 25, 2017, while conducting an examination of the No. 1 conveyor belt, the victim attempted to cross in an unsafe location, fell onto the moving belt and received fatal injuries as the belt transported him out of the mine.

The fatal accident occurred because the operator did not provide an adequate crossover for Jones and other miners to use as a means to cross over the belt. In addition, the operator had not installed a guard to prevent Jones from utilizing the transfer point as a means to cross the conveyor belt.

Signed by:

Carlos Mosley
District Manager

Date

ENFORCEMENT ACTIONS

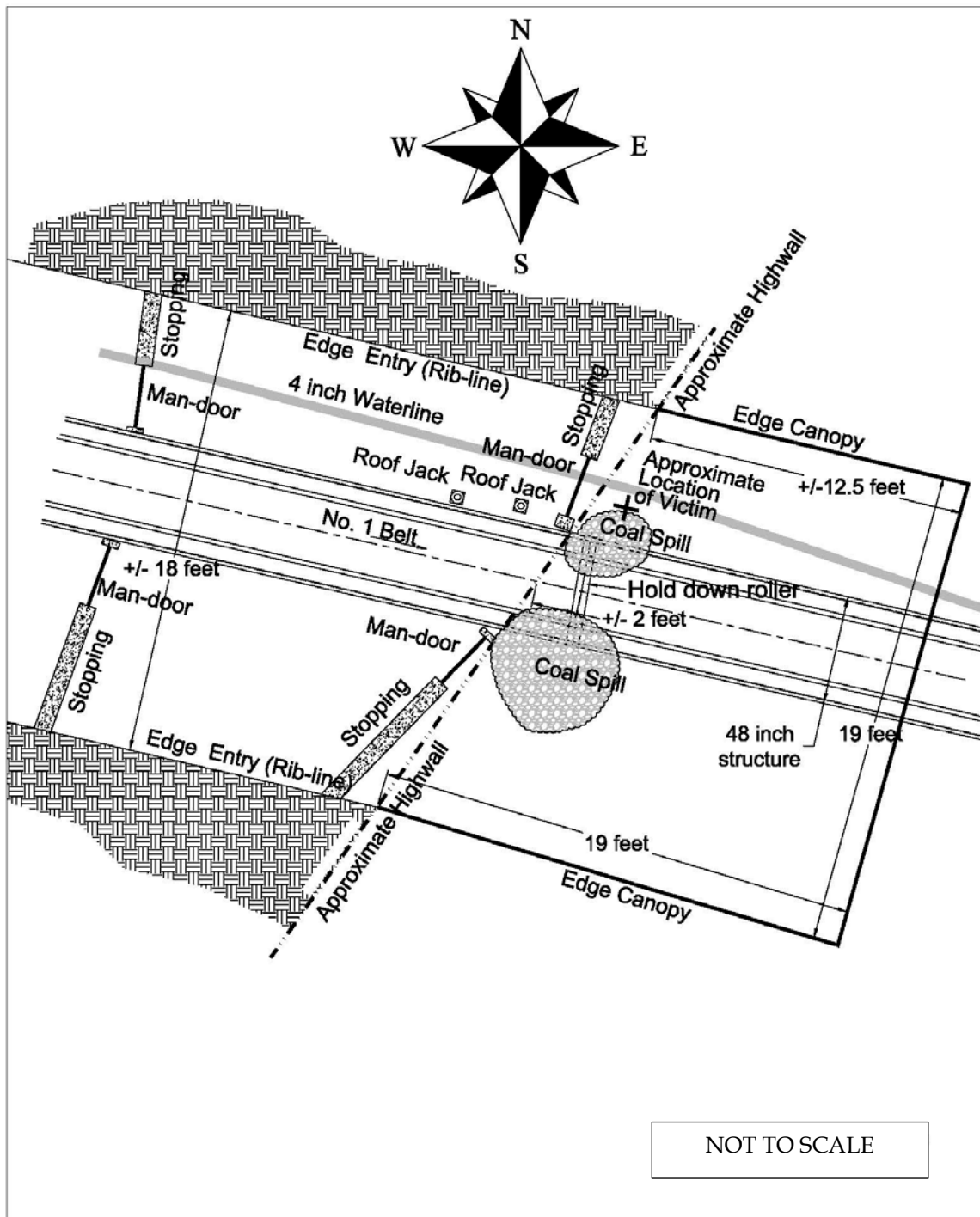
1. Section 103(k) Order No. 9125743, was issued to Carter Roag Coal Company, Pleasant Hill Mine to ensure the health and safety of all miners until an examination and investigation could be completed.

An accident occurred at this operation on August 25, 2017 at approximately 12:08 p.m. This order is being issued, under Section 103(k) of the Federal Mine Safety and Health Act of 1977, to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity at the entire mine until MSHA has determined that it is safe to resume normal mining operations in this area.

2. A 104(a) citation was issued for a violation of 30 CFR § 75.1403

A fatal accident occurred at this operation on August 25, 2017, where a miner attempted to cross the moving No. 1 conveyor belt at the No. 2 transfer and fell onto the belt. The mine operator failed to provide an adequate crossover to cross the moving No.1 conveyor belt outby the No. 2 transfer. The crossover provided did not provide the miner enough room to utilize the belt crossover. The crossover deck measured 27 inches in width, 74 inches in length, elevated 46.5 inches above the mine floor and provided a clearance between the deck and mine roof from 34 inches to 37 inches. There were no footprints or marks to indicate the crossover had been recently used.

Appendix A Drawing Showing Victim



Fatality - Portal Location Map

Pleasant Hill Mine
MSHA ID 46-08194 State ID U-1043-91B

Carter Roag Coal Company
HC 88 Box 200, Mill Creek, WV 26280
Middle Fork District
Randolph County, West Virginia

Appendix B
Photographs at Accident Scene

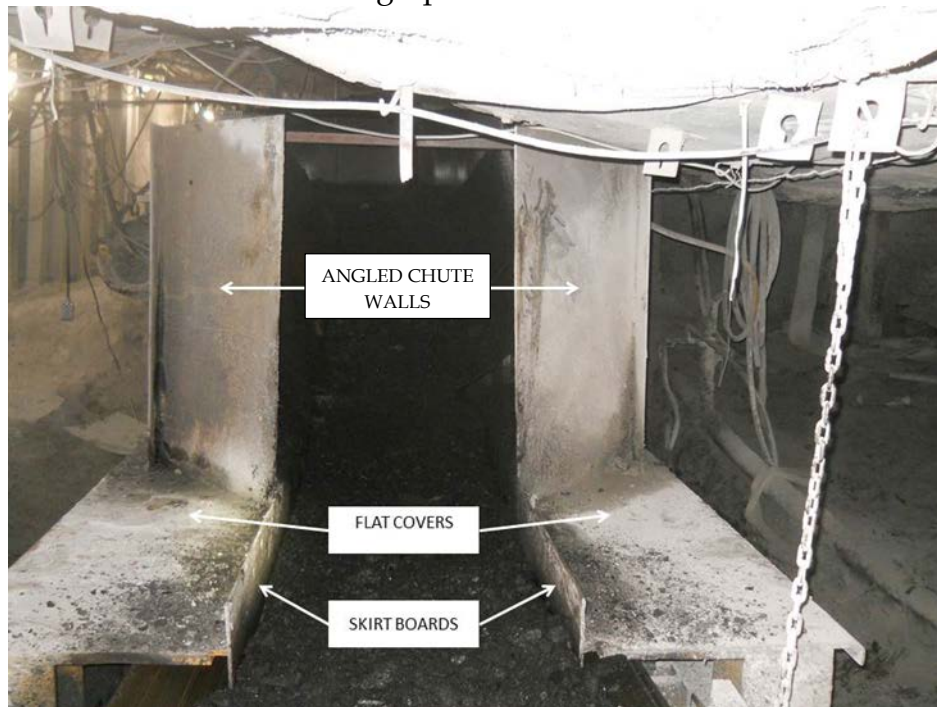
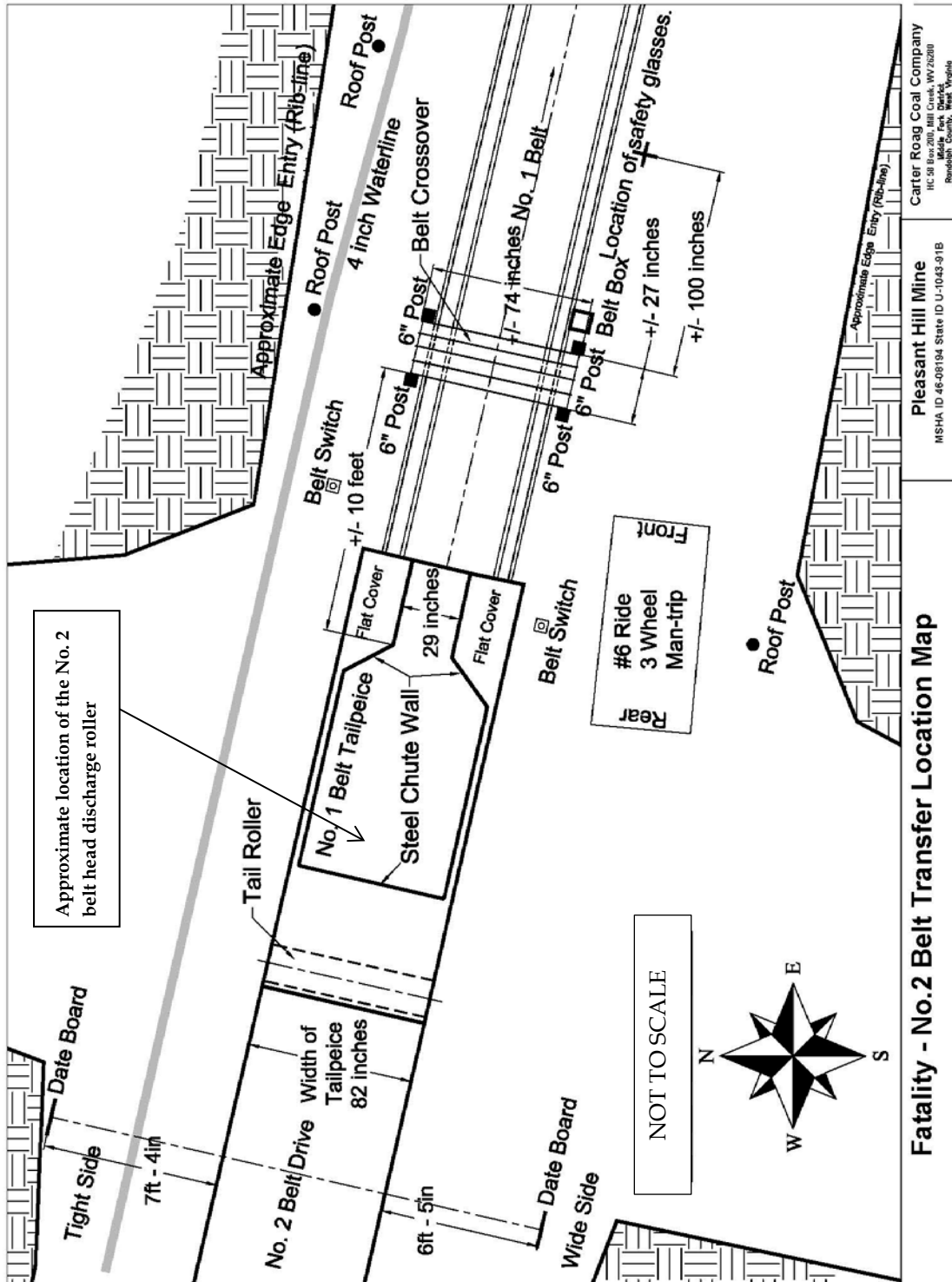


Photo of No. 1 transfer flat covers and rock box wings.



Photo of No. 2 transfer including the mantrip and the cross over.

Appendix C Drawing Showing No. 2 Belt Transfer



Appendix D

Persons Participating in the Investigation (Persons interviewed are indicated by a * next to their name)

Carter Roag Coal Company

*Chris Couch..... Mine Manager
*Fred Watson.....General Mine Foreman
*Curtis Bailey.....Production Superintendent
Kelvin Napier.....Safety Manager
Scott Sublett.....Safety Tech
Charles Williams.....Vice President of Maintenance
Don Jones.....Vice President of Safety
Daniel Sole.....Assistant Vice President of Safety
J.P. Richardson.....Vice President of Operations
Joshua Birchfield.....Corporate Director of Safety
*James Yoakum.....Outside Yard Man
*Thomas Lindsay.....Dispatcher
*Ronnie McCumbers.....Mine Examiner
*Alton Wamsley.....Mine Examiner

AAA Mine Services

*Jonathan Sexton.....Utility Miner
Matthew Ison.....Utility Miner

West Virginia Office of Miners Health Safety & Training

Jeff Bennett.....District Inspector
Greg Norman.....Director
Eugene White.....Deputy Director
Ed Peddicord.....Inspector at Large
Larry Wine.....District Inspector
Tadd Rankin.....District Inspector
John Scott.....Electrical Specialist
Jack Rife..... Esquire

Mine Safety and Health Administration

Joedy Gutta.....Impoundment Specialist
Tyler Peddicord.....Ventilation Specialist
Michael Stark.....Staff Assistant
Steven Stankus.....Supervisory Coal Mine Safety and Health Inspector
William K. Roberts.....MSHA Training Specialist

Appendix E Victim Information

Accident Investigation Data - Victim Information

U.S. Department of Labor

Mine Safety and Health Administration



Event Number: 6 2 7 7 2 0 2

Victim Information: 1

1. Name of Injured/ill Employee: <i>Owen Jones</i>		2. Sex: <i>M</i>	3. Victim's Age: <i>51</i>	4. Degree of Injury: <i>01 Fatal</i>	
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: <i>08/25/2017</i> b. Time: <i>14:51</i>				6. Date and Time Started: a. Date: <i>08/25/2017</i> b. Time: <i>6:30</i>	
7. Regular Job Title: <i>049 Fire Boss</i>		8. Work Activity when Injured: <i>017 Crossing Conveyor</i>		9. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
10. Experience a. This		b. Regular		c. This	
Years	Weeks	Days	Years	Weeks	Days
<i>1</i>	<i>39</i>	<i>0</i>	<i>1</i>	<i>39</i>	<i>0</i>
Work Activity:		Job Title:		Mining:	
<i>1</i>		<i>1</i>		<i>27</i>	
11. What Directly Inflicted Injury or Illness? <i>035 Belt Conveyor</i>		12. Nature of Injury or Illness: <i>370 Multiple Injuries</i>			
13. Training Deficiencies:					
Hazard:		New/Newly-Employed Experienced Miner:		Annual: Task:	
14. Company of Employment: (If different from production operator) <i>Operator</i>					
Independent Contractor ID: (if applicable)					
15. On-site Emergency Medical Treatment:					
Not Applicable:		First Aid:		CPR: EMT: Medical Professional: None: <input checked="" type="checkbox"/>	
16. Part 50 Document Control Number: (form 7000-1)			17. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>		

Appendix F
Photo of Accident Scene after Remediation



Replacement steel crossover at accident scene.



Metal barrier installed on the No. 2 transfer.