CAI-2014-12

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface Coal Mine

Fatal Fall of Highwall
October 7, 2014

Tinsley Branch HWM 61
Commonwealth Mining, LLC.
Pineville, Bell County, Kentucky
ID No. 33-04642

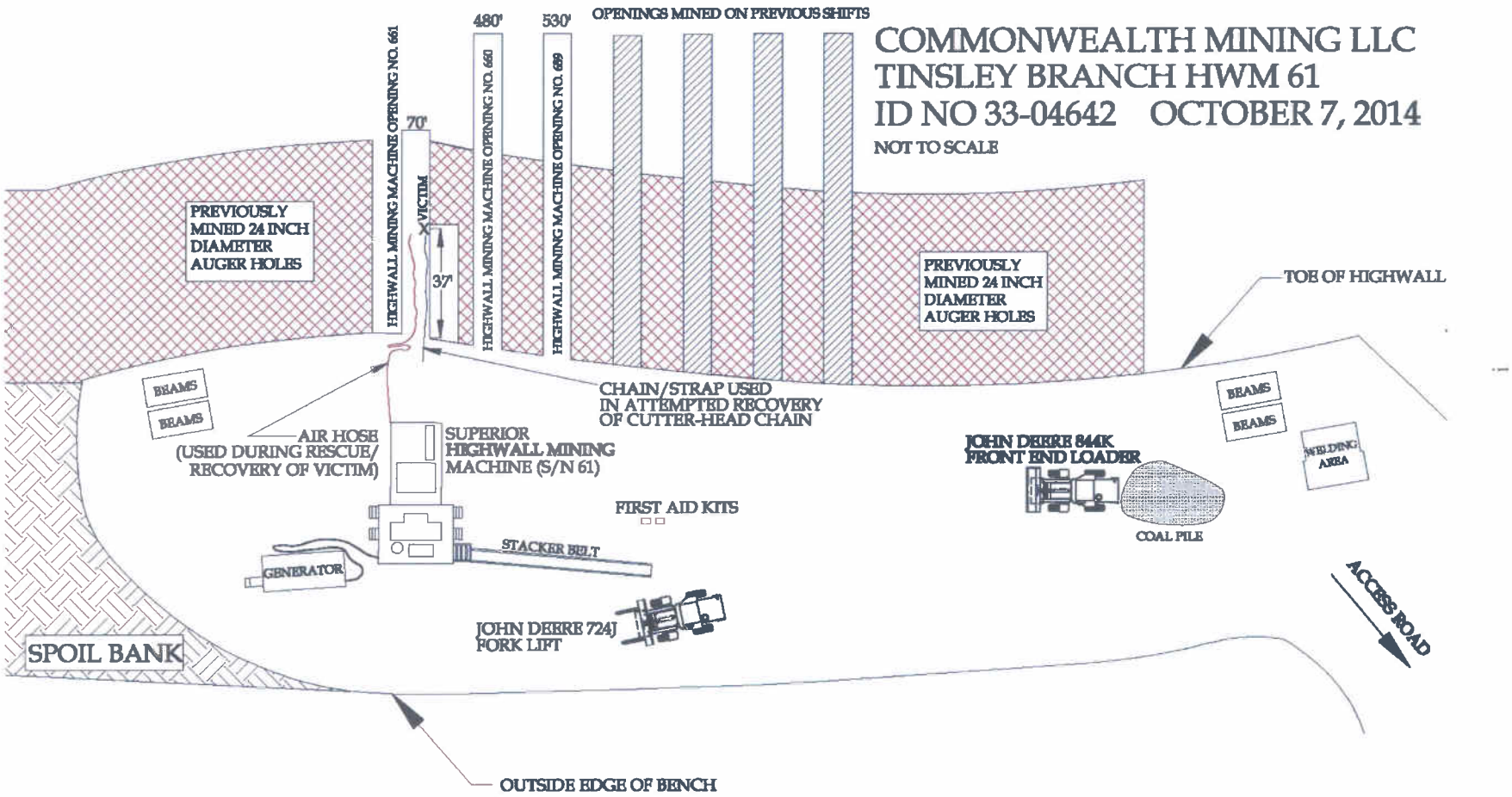
Accident Investigator

Argus Brock
Coal Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
District 7
3837 South US Hwy 25E
Barbourville, KY 40906
Jim W. Langley, District Manager

TABLE OF CONTENTS

SKETCH OF ACCIDENT SCENE



PHOTOGRAPH OF THE ACCIDENT SCENE

OVERVIEW

At approximately 5:00 p.m. on Tuesday, October 7, 2014, Justin Mize was killed at Commonwealth Mining, LLC's Tinsley Branch HWM 61 mine. The victim crawled 37 feet into an unsupported opening that was mined with a highwall mining machine to retrieve a broken cutter-head chain when a rock that measured approximately 6 feet long, 8 feet wide, and 16 inches thick fell on him, causing fatal crushing injuries.

GENERAL INFORMATION

Tinsley Branch HWM 61 is a surface mine located approximately four miles west of Pineville, Bell County, Kentucky and is operated by Commonwealth Mining LLC. Mining is conducted with a Superior Highwall Mining Machine in the Fireclay and Fireclay Rider coal seams. At the time of the accident, the mine employed twelve miners. The mine produces approximately 2,500 tons of coal per day with one mechanized mining unit (MMU) operating two shifts per day. The principal officers for the mine at the time of the accident were:

Michael Cox	Superintendent
Anthony Tyler Cornett	Mine Foreman
Gary Smith	Vice President of Administration
Harry Wright	Member
Stuart Cox	Member

Prior to the accident, the Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection (E01) on July 21, 2014. The Non-Fatal Days Lost (NFDL) injury incidence rate for the mine in 2013 was 0.0, compared to a National NFDL rate of 1.00.

DESCRIPTION OF THE ACCIDENT

On Sunday, October 6, 2014, the night shift crew was mining in the 400 feet deep, #659 opening (see sketch of Accident Scene). Their normal production shift ended on October 7, 2014 at 6:00 a.m. The day shift began at 6:00 a.m., with Anthony Cornett, Day Shift Foreman, performing a pre-shift examination of the highwall mining machine pit area. No hazardous conditions were recorded for this examination. Justin Mize, Forklift Operator, began his shift at 6:00 a.m. and proceeded with his normal routine.

The day shift crew consisted of Cornett; Mize; Adam Cox, Highwall Mining Machine Operator; Mark Sexton, Groundman; Steve Osborne, Utility Man; Chris Newman, Forklift Operator; Johnathan Newsome, Loader Operator; and Larry Partin, Welder. The entire crew started by adding seven to eight more push beams before finishing this production cycle. The push beams for the highwall mining machine are 20 feet in length and contain dual auger conveyors which transfer the coal mined by the cutting head to the surface. Upon completion of the #659 opening, the push beam and the cutter-head were retracted out of the opening.

Between 9:00 and 9:30 a.m., the highwall mining machine was moved over to mine the #660 opening. This opening was mined approximately 400 feet deep. The highwall mining machine operator then retracted the push beams and the cutter-head out of the opening at approximately 3:00 p.m. The entire crew serviced the mining machine, set bits, and greased and adjusted the cutter-head chains in preparation to start the #661 opening.

At approximately 3:30 p.m., the #661 opening was started and mining had advanced approximately 70 feet when Cornett, who was operating the highwall mining machine, informed the crew that the right side motor had stopped cutting and the push beams and cutter-head would have to be retreated from the underground opening. When the highwall mining machine was out of the opening, the crew noticed the right side cutter-head chain was missing.

Newsome, Cornett, A. Cox, Newman, and Sexton gathered at the face of the opening. Utilizing a light, they saw the cutter-head chain lying near the right rib approximately 37 feet into the opening. They discussed how to retrieve the chain from the mine opening. Cornett asked A. Cox if he was going in the opening to retrieve the chain. A. Cox refused to go, but he told Cornett that Mize would go into the opening to connect to the chain so it could be removed from the opening. While standing at the face of the opening, Cornett, Newsome, Newman, and Sexton were examining the roof when Mize stated to Cornett, Newsome, Newman, and Sexton that he would go into the opening to retrieve the chain. Newsome, Newman, and Sexton insisted that the roof was too bad to go into the opening, but Mize remained firm that he could retrieve the chain. Foreman Cornett and Mize told Sexton to find something that Mize could take into the unsupported opening to connect to the chain so that the chain could be pulled outside. Sexton obtained a chain and straps from a truck nearby. Cornett and Mize tied and taped the chain and straps together and Cornett instructed Sexton to get the loader and have it ready while Mize entered the opening.

Cornett was standing at the entrance of the opening when Mize entered the highwall mining machine opening. During the accident investigation interviews, no witness recalled Cornett taking any action to prohibit Mize from entering the unsupported highwall mining machine opening. Approximately ten to fifteen seconds after Mize entered the opening, Cornett heard the roof fall. Cornett shouted out to Mize, but received no response. Cornett traveled into the opening to check on Mize and found that he was covered by the roof fall. Cornett exited the opening and told A. Cox, Newsome, Newman, and Sexton that Mize was covered up and he needed their help to get him out. Cornett instructed them to gather crib blocks, hammers, and a slate bar to help free Mize from the rock. A. Cox, Newsome, and Sexton immediately dispersed to collect the materials while Cornett called 911. Cornett instructed Newman to meet the ambulance at the bottom of the hill. Newsome was fearful and refused to enter the opening. Cornett, A. Cox, and Sexton entered the opening in an attempt to rescue Mize. After reaching Mize's location, they shouted outside and advised Newsome that they needed more crib blocks and a pneumatic jack to free Mize from beneath the rock. Sexton observed the roof of the opening as A. Cox and Cornett worked to free Mize from the fall and bring him outside. Newsome retrieved the materials including a Mine Emergency Technician bag and medical supplies and placed them near the opening for use when Mize was brought outside.

Cornett and A. Cox recovered Mize from beneath the rock and brought him outside from the mine opening. Mize was unresponsive and the crew immediately began CPR. The Bell Country Ambulance Service arrived at 5:20 p.m., assumed care of Mize and subsequently transported him to Pineville Community Hospital. He was later transported

onto a helicopter to be air lifted to Holston Valley Medical Center in Kingsport, Tennessee. Shortly after leaving the landing zone, Mize went into cardiac arrest and the flight paramedics were unable to resuscitate him. The flight crew immediately returned to the landing zone of the Pineville Community Hospital where Mize was pronounced dead at 9:36 p.m. by Bell County Coroner, Jay Steele.

INVESTIGATION OF THE ACCIDENT

Gary Smith, Vice President of Administration, called the National Call Center at 5:48 p.m. on October 7, 2014. The call center then notified Ryan O'Boyle, MSHA District 7 Roof Control Supervisor, of a serious accident. James Creech, Nally & Hamilton Safety Director, called Sam Creasy, Barbourville Field Office Supervisor, and David Faulkner, Coal Mine Inspector, to inform them that a serious accident had occurred at Commonwealth Mining LLC's, Tinsley Branch Mine. A non-contributory 104(d)(1) order was issued to the company for failure to report the accident to MSHA immediately, at once, without delay, and within fifteen minutes as required by Code of Federal Regulations (CFR), Title §50.10.

A 103(j) Order was issued verbally by MSHA Inspector Faulkner at 5:49 p.m. to ensure the safety of the miners and to preserve the accident scene. Faulkner traveled to the accident scene and upon arrival, modified the 103(j) order to a 103(k) order at 6:32 p.m. He gathered preliminary information and examined the accident scene. Argus Brock, Roof Control Specialist, was assigned as MSHA's lead accident investigator and was dispatched to the accident site.

The accident investigation and interview process were jointly conducted with personnel from the Kentucky Division of Mine Safety (KDMS) and MSHA. Formal interviews were conducted on October 8, 2014 and October 9, 2014, at the MSHA District 7 Office. The persons who participated in the investigation are listed in Appendix A. The persons who were interviewed are listed in Appendix B.

DISCUSSION

The mine operator utilizes a Superior Highwall Mining Machine on the surface to penetrate the coal seams and transfer the coal to the surface. At this operation, the highwall mining machine openings created by the mining process are typically 9.5 feet wide, 3 feet high, and up to 400 feet deep. Coal pillars or webs are left between each highwall mining machine opening to support the overburden. At this location of the mine, the coal seams had previously been mined with a 24-inch auger mining machine to a depth of approximately 70 feet. It is not known when these auger holes were mined. The web spacing between the highwall mining machine openings is a minimum of 12.5 feet as specified in the acknowledged Ground Control Plan. The maximum overburden height is 302.5 feet (see pictures in Appendix C).

From the facts gathered during the investigation, the highwall mining machine opening where the accident occurred had only been driven 70 feet due to the cutter-head chain breaking. The cutter-head chain was located 37 feet from the surface into the opening. Twelve to twenty inches of loose drawrock and cap coal was observed hanging from the roof of the highwall mining machine opening where the accident occurred. Additionally, drawrock was present in the roof of the #659 highwall mining machine opening which was mined earlier in the shift. Drawrock that had already fallen from the roof was also observed on the floor of the #659 highwall mining machine opening.

When the victim crawled underground in an attempt to recover the broken cutter-head chain, no roof support or ground support was used. Additionally, no roof support or ground support was used at any time while the foreman and the other two miners were attempting to rescue the victim. At no time was roof support or ground support used to protect the victim or those who recovered the victim.

Several miners stated in their interviews that there was no reason to enter the mine opening to retrieve the cutter-head chain because three to four additional cutter head chains were available on mine property at the time of the accident. MSHA accident investigators confirmed these chains were available on mine property. Although the victim should not have entered the mine opening for any reason, because other cutter head chains were available and could have been used, he did not need to enter the mine opening.

Management Knowledge

Mine management, specifically the foreman, knowingly allowed an employee to enter the highwall mining machine opening to retrieve a cutter-head chain. The foreman also assisted other miners in preparing a chain and straps to connect to the cutter-head chain for retrieval from the opening. Adverse roof conditions in the mine opening in the form of drawrock and cap coal were obvious. Title 30 CFR § 77.1502 states that no miners are allowed to enter a highwall mining machine opening without a plan approved by the District Manager. Such a plan did not exist at this mine.

After the accident occurred, the foreman and two other miners entered the highwall mining machine opening to recover the victim without using any type of roof support and without prior approval of the District Manager. A non-contributory 104(d)(1) order was issued for a violation of 30 CFR §77.1502 for these miners entering a highwall mining machine opening without a plan approved by the District Manager.

Interviews also indicated that there were previous occasions when the crew members associated with the operation of this highwall mining machine had entered mine openings. A. Cox indicated that this was not the first time crew members had entered a highwall mining machine opening to retrieve a chain with the foreman's knowledge.

Experience and Training

Mize had 9 years and 26 weeks of mining experience, including 2 years and 31 weeks at this mine and at this work activity.

During the accident investigation, MSHA examined the Experienced Miner and Annual Refresher training records of all of the mine operator's employees including the victim's training records. All training records were found to be current. However, revisions to the mine's training plan were made as a result of the accident investigation.

ROOT CAUSE ANALYSIS

An analysis was conducted to identify the most basic causes of the accident that were correctable through reasonable management controls. During the analysis, a root cause was identified that, if eliminated, would have either prevented the accident or mitigated its consequences.

Listed below is the root cause identified during the analysis and the corresponding corrective action implemented to prevent a recurrence of the accident:

1. *Root Cause:* Mine Management was present and allowed a miner to enter an unsupported highwall mining machine opening. Mine management allowed a practice to exist where miners were entering unsupported highwall mining machine openings. The miners were not adequately trained on this subject.

   Corrective Action: Mine Management revised the approved training plan by adding categories to assure that miners are specifically trained that no person shall be permitted to enter a highwall miner opening, except with prescribed conditions as approved by the District Manager. Categories revised include: New Miner Training, Experienced Miner Training, Annual Refresher Training, Task Training, and Hazard Training.

   All miners were trained on October 21, 2014, on the new provisions of the revised training plan. Mine management also implemented company policy regarding disciplinary actions to be taken for any employee, including foremen, who enter a highwall mining machine opening.

   Cornett, who was the mine foreman at the time of the accident, is no longer a foreman at this mine; however he is still employed at the mine.

CONCLUSION

Mine management permitted miners to enter a highwall mining machine opening without obtaining approval from the District Manager. This resulted in fatal crushing injuries to a miner who entered an unsupported highwall mining machine opening. A practice of allowing miners to enter unsupported highwall mining machine openings was permitted by mine management.

Approved By:

Jim W. Langley
District Manager

2-24-2015
Date

ENFORCEMENT ACTIONS

Order No. 8389194 was issued to Commonwealth Mining, LLC on October 7, 2014, under the provisions of Section 103(j) of the Mine Act:

An accident occurred at this operation on 10-07-2014, at approximately 16:40. As rescue and recovery work is necessary, this order is being issued, under Section 103(j) of the Federal Mine Safety and Health Act of 1977, to assure the safety of all persons at this operation. This order is also being issued 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 Highwall Miner Operation Pit Area, until MSHA has determined that it is safe to resume normal mining operations in this area. This order applies to all persons engaged in the rescue and recovery operation and any other persons on-site. The order was initially issued orally to the mine operator at 17:49 and now been reduced to writing.

Modified Order No. 8389194 to 103(k) order at 18:32.

104(d)(1) Citation No. 8382574 was issued to Commonwealth Mining, LLC, for violation of 30 CFR § 77.1502

Mine management, specifically the mine foreman, knowingly allowed an employee to enter the highwall mining machine opening to retrieve a cutter-head chain. While the miner was in the opening, a rock fell from the roof striking and fatally injuring the miner. As per 30 CFR 77.1502, no miners are allowed to enter a highwall mining machine opening without a plan approved by the District Manager.

This violation is an unwarrantable failure to comply with a mandatory standard.

APPENDIX A

Persons Participating in the Investigation

Mine Company Officials

Name	Title
Gary Smith	V.P. of Administration

Kentucky Division of Mine Safety

Name	Title
Tim Fugate	Deputy Chief Accident Investigator
Greg Goins	Mine Safety Specialist
Rick Johnson	Branch Manger
Dean Bush	Mine Safety Specialist
Johnny Morgan	Mine Safety Specialist
Randy Partin	Mine Safety Specialist
Randy Turner	Mine Safety Specialist
James Skidmore	Mine Safety Specialist

Mine Safety and Health Administration

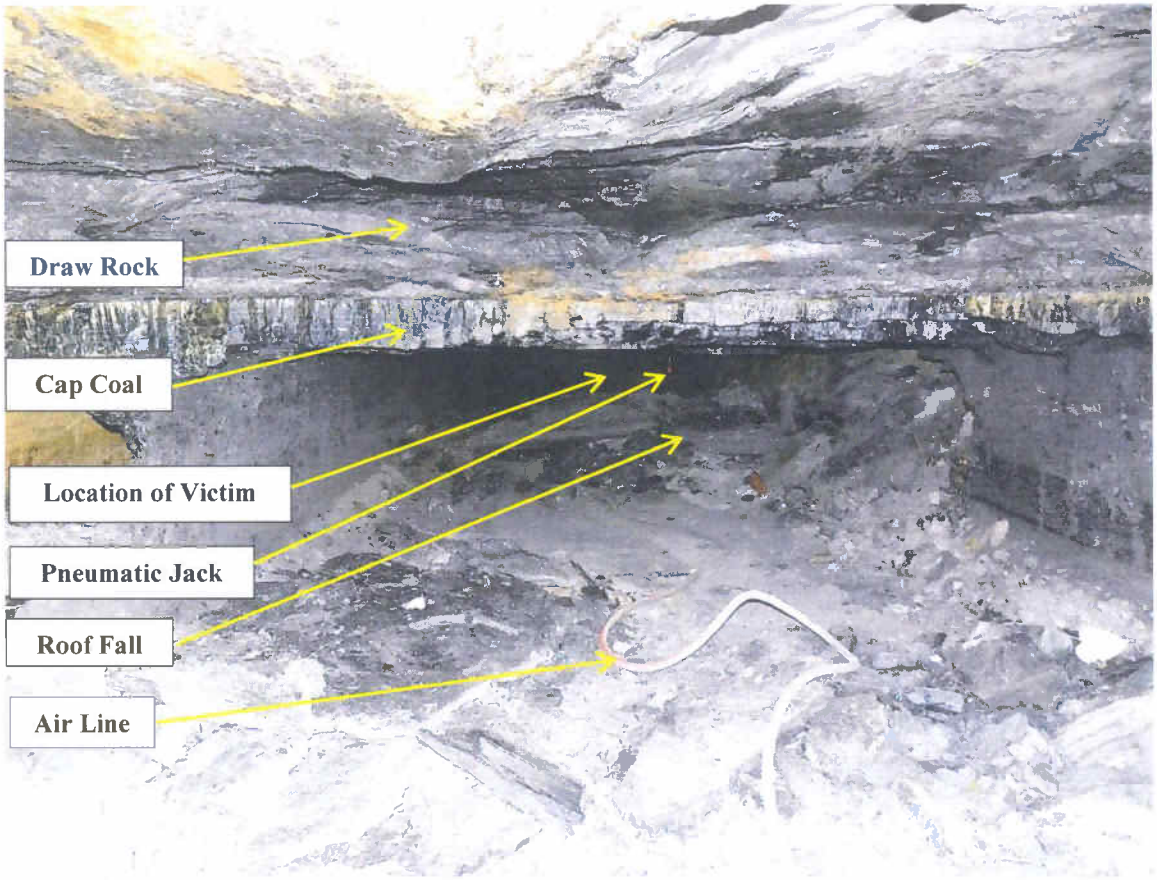
Name	Title
Jim Langley	District Manager
Clayton Sparks	Assistant District Manager
Dennis Cotton	Assistant District Manager
Steven Sorke	Staff Assistant & Accident Coordinator
William Clark	CMI Supervisor
Sam Creasy	CMI Supervisor
Ryan O'Boyle	Roof Control Supervisor & Family Liaison
Argus Brock	Accident Investigator
David Faulkner	Surface Coal Mine Inspector

APPENDIX B

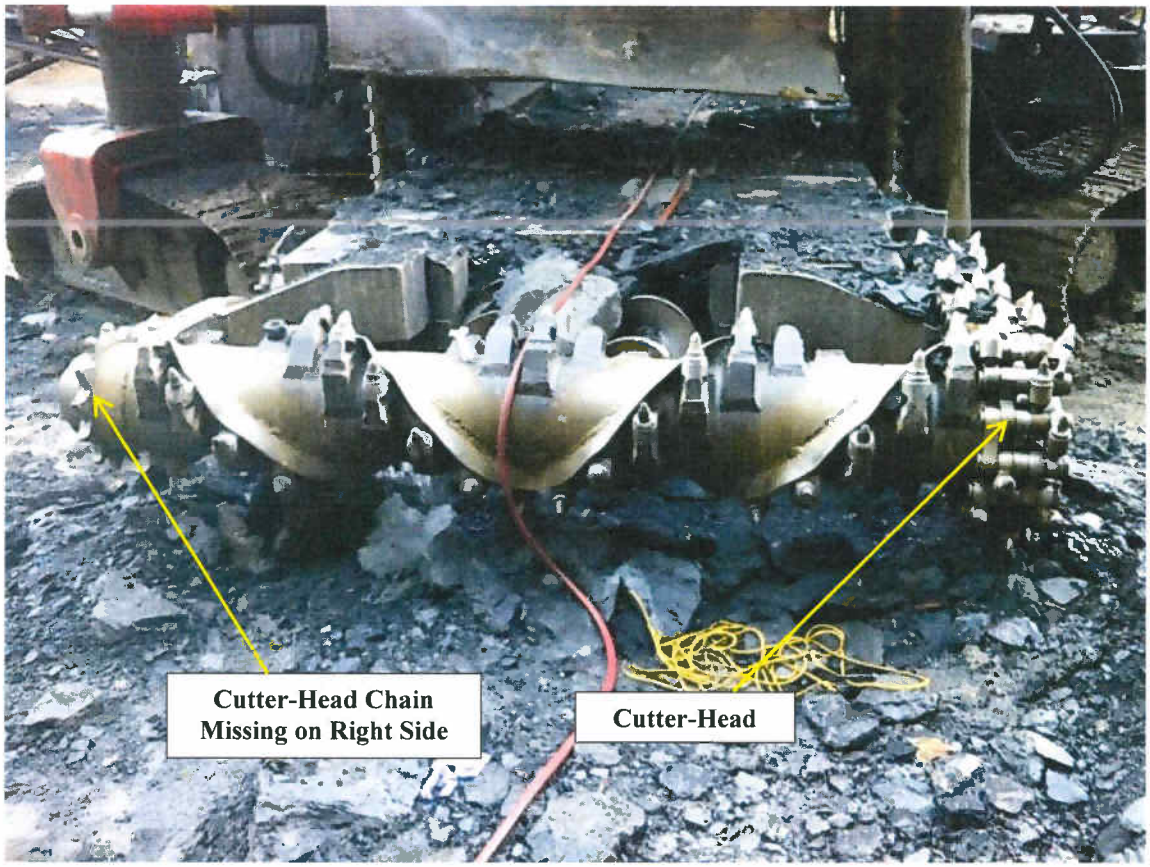
List of Persons Interviewed

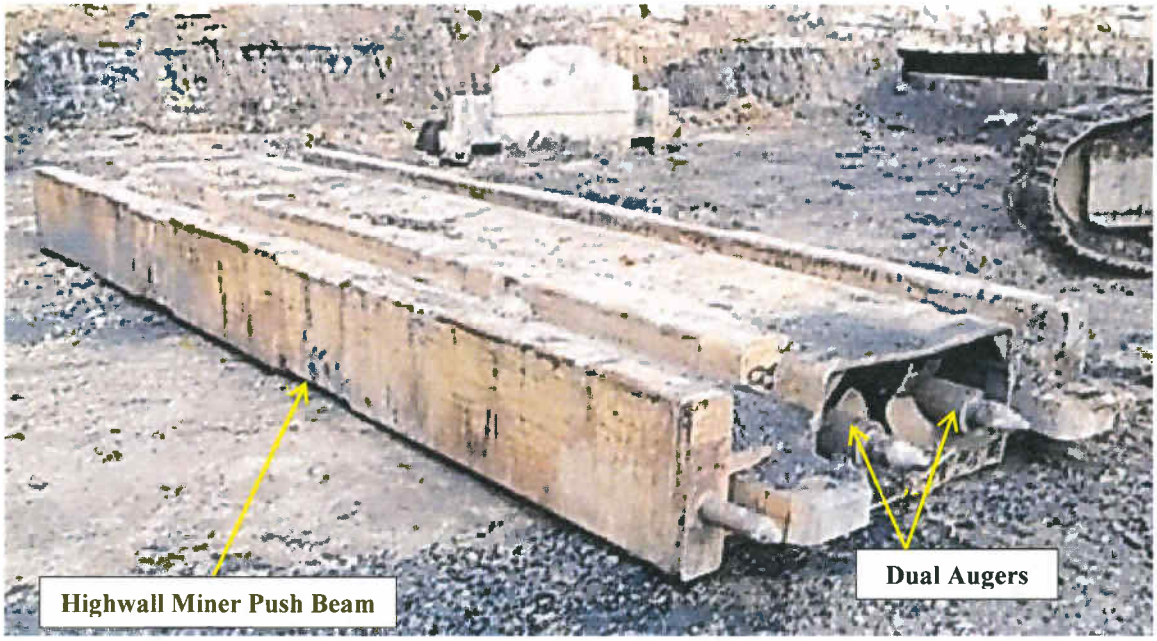
Name	Title
Anthony Cornett	Day Shift Foreman
Adam Cox	Highwall Mining Machine Operator
Mark Sexton	Groundman
Steve Osborne	Utility Man
Chris Newman	Forklift Operator
Johnathan Newsome	Loader Operator
Larry Partin	Welder

APPENDIX C


Draw Rock
Cap Coal
Location of Victim
Pneumatic Jack
Roof Fall
Air Line


Highwall Mining Machine Opening
Auger Holes


Cutter-Head Chain
Missing on Right Side
Cutter-Head


Highwall Miner Push Beam
Dual Augers

APPENDIX D

Accident Investigation Data - Victim Information
Event Number: 6 4 2 9 6 0 6

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

Victim Information: 1

1. Name of Injured/Ill Employee:	2. Sex:	3. Victim's Age:	4. Degree of Injury:
Justin Mize	M	31	0 1 Fatal

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 10/07/2014 b. Time: 21:36	a. Date: 10/07/2014 b.Time: 06:00

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
0 8 2 Front-End-Loader Operator	0 0 6 Entered Highwall Mining Machine Opening	Yes | No X

10. Experience:	Years	Weeks	Days
a. This Work Activity:	2	31	0
b. Regular Job Title:	2	31	0
c: This Mine:	2	31	0
d. Total Mining:	9	26	0

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
1 2 1 Back mine roof, hanging wall	1 7 0 Crushing

13. Training Deficiencies:
Hazard: | New/Newly-Employed Experienced Miner: | Annual: | Task:

14. Company of Employment: (If different from production operator)
Independent Contractor ID: (if applicable)

15. On-site Emergency Medical Treatment:
Not Applicable: | First-Aid: | CPR: X | EMT: X | Medical Professional: X | None:

16. Part 50 Document Control Number: (form 7000-1)

17. Union Affiliation of Victim: 9999 None (No Union Affiliation)