

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Coal Preparation Plant

Fatal Slip or Fall of Person Accident
May 17, 2012

Liberty Processing
Independence Coal Company, Inc.
Uneeda, Boone County, West Virginia
I.D. No. 46-03755

Accident Investigator

Andrew Sedlock
Coal Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
District 4
100 Bluestone Road
Mount Hope, West Virginia 25880
Charles E. Carpenter, District Manager

TABLE OF CONTENTS

Overview	1
General Information	2
Description of the Accident	2
Investigation of the Accident	3
Discussion	4
Root Cause Analysis	6
Conclusion	7
Enforcement Actions	8
APPENDIX A - Persons/Participants in this Investigation	10
APPENDIX B - List of Persons Interviewed	11
APPENDIX C - Accident Scene Sketches and Photographs	12
APPENDIX D - Victim Information	16



Photo of Accident Site

OVERVIEW

On Thursday, May 17, 2012, at 11:58 a.m., Clyde W. Dolin, a 57-year old mechanic with 39 years of mining experience, was fatally injured when the 14-foot fiberglass extension ladder he was using became unstable and slid across an I-beam, causing him to fall through the preparation plant hoist well to a concrete floor 39 feet below.

The victim was preparing to utilize a torch to cut and remove a 12-inch steel I-beam (trolley beam) that was located above the 3rd floor of the preparation plant and adjacent to an opening in the hoist well. The I-beam was no longer useful and was being removed to prevent it from interfering with the movement of material and supplies that were hoisted into the plant.

GENERAL INFORMATION

Liberty Processing is a coal preparation plant located near Uneeda in Boone County, West Virginia. The plant is operated by Independence Coal Company Inc., a subsidiary of Alpha Natural Resources, Inc. This facility operates three shifts per day, eight hours per shift, five days per week, with a total plant employment of 45 persons. The plant processes approximately 36,000 tons of raw coal per day.

The principal officers for Liberty Processing at the time of the accident were:

Eric Salyer.....	President
Joshua Peters.....	Superintendent
Lewis Sheppard, Jr.	Safety Director

Prior to the accident, the Mine Safety and Health Administration (MSHA) completed the last regular inspection of the Liberty Processing Plant on October 17, 2011. The Non-Fatal Days Lost (NFDL) Incident Rate for this plant in 2011 was 1.78, compared to the 2011 national average of 1.68 for operations of the same type.

DESCRIPTION OF THE ACCIDENT

On Thursday, May 17, 2012, Dolin began his shift at 7:00 a.m. He had not received any specific work directions so he began to walk through the plant observing the flow of coal, water, and various plant components to ensure they were operating properly. He then helped Mark White, Thickener Operator, clear trash bins located on different floors of the plant.

Brandon Geer, Mechanic, had performed some routine repairs on a feeder and heavy media vessel, as well as taken some specific gravity readings to ensure normal plant operation. Geer exited the plant at ground level some time after 10:00 a.m. Geer walked to the hoist well of the plant to take the man lift back to the top floor. Dolin was on the 3rd floor, and discussed his new role as “Safety Champion” for the plant, a role that Geer had previously filled. As part of the plant’s safety program, the employees submit written suggestions, or cards, on ways to improve safety or efficiency. They talked briefly about counting and separating the cards that had been submitted by employees. While talking with Dolin, Geer noticed White on the 3 ½ floor level of the plant hooking up oxygen and acetylene tanks. White had helped Dolin do some clean-up work earlier in the day, and Dolin had suggested they cut off and remove an old 12-inch trolley beam located above the third floor. The old trolley beam had been used to hoist materials, but was no longer needed. The beam interfered with material and

supplies that were hoisted into the plant. To eliminate the interference, an employee had submitted a card suggesting that the beam be cut off and removed.

Geer travelled to the 3½ floor where the upper section of a fiberglass extension ladder was placed on the I-beam. While Geer and Dolin were talking, James “Jamie” Maynard, Plant Foreman, arrived and noticed that Dolin was holding an approximately 3-inch wide nylon hoist strap. Dolin generally explained to Maynard his plans for removing the I-beam. Geer and Maynard steadied the ladder section as Dolin climbed up to the beam. White turned on the oxygen and acetylene gases and adjusted hoses on the 3 ½ floor level. Maynard left and traveled to the 4th floor level. Geer remained, but moved to the opposite side of the hoist well to raise the hoist hook up to the 3rd floor level. Dolin wrapped the nylon strap around the end of the trolley beam. Geer raised the hoist hook to the floor level where it could be attached to the strap and provide support for the beam. Geer noticed the extension section of the ladder shaking and saw the ladder extension section and Dolin fall across the 3rd floor hoist well handrail and down 39 feet to the concrete floor at ground level.

Geer immediately began to call for help by way of portable radio. Norman Roberts, Pipe Fitter, was walking on the ground level toward the hoist well and was the first to arrive at the scene. Maynard heard the call for help and looked down the hoist well to see Roberts on the ground floor, who was responding to assist Dolin.

First aid was immediately administered and a call was placed to 911. Maynard assessed Dolin’s injuries and Geer helped position the victim for cardiopulmonary resuscitation (CPR).

James Knoble, an emergency medical technician from a nearby mine, was bringing dust samples to the lab at the plant office when he saw miners carrying Dolin out of the preparation plant. Knoble provided additional assistance and utilized an automatic external defibrillator (AED). Chest compressions were administered until ambulance personnel arrived and provided additional aid. The victim was transported to Boone Memorial Hospital where he was pronounced dead at 1:11 p.m.

INVESTIGATION OF THE ACCIDENT

MSHA personnel were notified of the accident at 12:15 p.m., on May 17, 2012. A verbal 103(j) order was issued to ensure the safety of all persons during the recovery operation. An investigation team was sent to the preparation plant.

The 103(j) order was modified to a 103(k) order by the MSHA accident investigator upon arrival.

An investigation was jointly conducted by MSHA, the West Virginia Office of Miners' Health, Safety & Training (WVOMHS&T), and the plant operator. A list of persons who participated in the investigation is provided in Appendix A.

Preliminary information was collected and photographs, measurements, and sketches were taken of the accident scene. Interviews were conducted with the employees and management personnel of Independence Coal Company Inc., Liberty Processing, who were determined to have knowledge of the facts regarding the accident. Interviews were conducted at the main office of the preparation plant on May 17-18, 2012. A list of miners interviewed is provided in Appendix B.

DISCUSSION

Accident Scene

The Liberty Processing Plant is composed of two portions, known as the "A" and "B" sides, that are joined together to process coal from two mining operations. The "A" side of the plant, where the accident occurred, consists of seven floors. Each floor is of concrete construction and a hoist well, a vertical opening measuring 8 feet by 7 ½ feet, is present on each floor for the purpose of delivering equipment or materials to each floor. The hoist well opening on the 3rd floor had a handrail, measuring 42 inches high, surrounding the opening (see Appendix C).

A 12-inch I-beam (trolley beam) extended slightly out into the hoist well at a distance of 10.2 feet above the 3rd floor. The upper section of a 14-foot fiberglass extension ladder had been placed parallel to the hoist well with the top of the ladder positioned against the trolley beam and the base of the ladder was positioned 4 feet from vertical. Scratch marks on the back side of the ladder matched the slide marks found on the trolley beam where the ladder section was positioned prior to the accident. According to testimony, the plan was to secure the end of the beam being cut off by attaching the hoist hook and strap. A strap was found wrapped around the end of the trolley beam. An oxygen/acetylene torch was laying 4 feet from the base of the ladder.

Equipment Used and Work Procedures

Folding ladders and extension ladders of various sizes are used in the preparation plant. The ladder in use at the time of the accident was a 14-foot orange fiberglass extension portion of a 25-foot extension ladder. A yellow and black warning sticker attached to the side of the extension warns, "Caution. This

ladder section is not designed for separate use” (see Appendix C). The extension does not have leveling feet for additional stability and the rail ends of the ladder extension are rounded and damaged, creating a very small area of contact with the floor (see Appendix C). These factors, combined with the fact that the base of the extension section of the ladder was placed on a concrete floor and because the upper portion of the extension rested on a metal beam, created a slipping and sliding hazard. Additional ladder extensions were found in the plant and appear to have been used separate from the original ladders. A 7-foot 3-inch extension section, which had been cut off from the main portion of the ladder, was leaning against the wall on the 5th floor. On the 6th floor, a 7-foot 8-inch aluminum ladder extension section was leaning against the wall and a 12-foot 2-inch extension section was found at the motor control center (electrical room). A 12-foot 2-inch extension section was leaning against the heavy media vessel sump. All these ladder extensions were available for use by the miners. The procedure for using and working from ladders (in this case, an extension section of a ladder) was to tie off the ladder section and to use properly secured fall protection, consisting of a harness and lanyard. None of the ladder sections which were removed from the original ladders had leveling feet. The edges of the fiberglass ladder extension sections were rounded off, and the aluminum ladder sections were pointed at the end.

Experience and Training

Dolin had 39 years of total mining experience, with the last 13 years at Liberty Processing. His most recent annual refresher training was received on February 20, 2012. Task training had been completed for Dolin on various types of equipment on July 18, 2003; February 24, 2004; February 5, 2011; and February 20, 2012. His Newly Employed Experienced Miner Training was completed on January 30, 1999. Dolin’s job duties included repair and maintenance on plant components, operation of various kinds of mobile equipment, and troubleshooting problems with equipment.

ROOT CAUSE ANALYSIS

A root cause analysis was conducted. Root causes were identified that could have affected the severity of the accident or prevented loss of life. Listed below are root causes identified during the analysis and their corresponding corrective actions.

Root Cause: Management did not ensure that complete ladders being used and were of substantial construction, maintained in good condition, and/or used according to the manufacturer's recommendations.

Corrective Action: Extension sections of ladders, which were found separated from the bases, were removed from the plant. A formal fall protection training program was developed and submitted to MSHA. The affected miners were given training in the selection, inspection, and safe use of ladders. New ladders in proper working order were purchased and placed into service.

Root Cause: Management failed to provide a safe means of access to the working area. The ladder section being used to access the I-beam where work was being performed was not secured at its top to prevent it from slipping or falling.

Corrective Action: All miners, including management, received classroom instruction and hands on application of properly securing ladders.

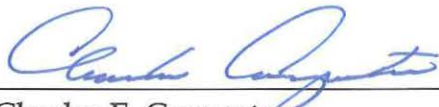
Root Cause: Management failed to ensure safety belts and lines were being worn where there was a danger of falling.

Corrective Action: Classroom and hands on instruction was conducted where each employee, including management, inspected, correctly adjusted, and secured fall protection harnesses.

CONCLUSION

The accident occurred because of management's failure to ensure equipment was used and maintained in safe working order, and in accordance with the ladder manufacturer's recommendations. A practice existed of using extension sections throughout the plant, separate from ladder base portions. The ladder section being used was not properly secured to prevent it from slipping or falling and the use of personal fall protection equipment was not ensured where there was a danger of falling.

Approved by:



Charles E. Carpenter
District Manager

12-6-12

Date

ENFORCEMENT ACTIONS

1. 103(k) Order No. 7272976 An accident occurred at this operation on May 17, 2012, at approximately 12:00 noon, when a miner attempting to tie off an overhead beam, fell from a ladder on the third floor down the hoist well and landed on the first floor. This Order is issued to assure the safety of all persons at this operation, and to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity in or immediately around the Liberty Processing Plant until MSHA has investigated the scene of the accident. Liberty Processing shall obtain prior approval from an authorized representative for all actions to recover and/or restore operations to the affected area.
2. 104(d)(1) Citation No. 8129395 CFR 77.206(a). The 14-foot extension section of an extension ladder, marked with a conspicuously visible sticker stating "Caution, this ladder section is not designed for separate use," was not of substantial construction nor maintained in its original condition (attached to the base) when used to access a 12-inch I-beam that was to be removed. The extension (upper) section of the ladder was not being maintained in good condition in that it did not have leveling feet to provide for horizontal stability and the ends of the extension rails were rounded and worn where they contacted the concrete floor. The use and condition of this extension ladder section contributed to a fatal accident that occurred at this facility on May 17, 2012. A mechanic using this ladder fell through a hoist well onto a concrete floor located 39 feet below his work area.

According to an eyewitness, James Maynard, Foreman, was present at the work area immediately prior to the accident and helped a witness steady the ladder while the victim climbed the ladder to perform the work. Additionally, the investigation found the obvious and extensive condition to be prevalent in that four (4) other ladder extension sections were found in the plant that were separated from their bases and appeared to have been used in that manner. Maynard allowed the ladders to be used despite their condition and despite the presence of conspicuous warning labels attached to the ladder extensions. Maynard engaged in aggravated conduct constituting more than ordinary negligence. This violation is an unwarrantable failure to comply with a mandatory standard.

3. 104(a) Citation No. 8129396 CFR 77.205(a). A safe means of access was not provided to a working place when a mechanic ascended a ladder in order to cut off and remove a 12-inch I-beam located 10.2 feet above the third floor level of the preparation plant. The ladder was not secured against movement prior to the mechanic performing work at an elevated location, above the third floor and

adjacent to an open hoist well that was located 39 feet above the basement floor of the plant. This condition contributed to a fatal accident that occurred at this facility on May 17, 2012, when the ladder slid on the I-beam causing the mechanic to fall through the hoist well onto a concrete floor located 39 feet below.

4. 104(d)(1) Order No. 8129397 CFR 77.1710(g). A mechanic working at this facility was not required to wear a safety belt and line while working in an elevated location where there was a danger of falling. This contributed to a fatal accident that occurred at this facility on May 17, 2012 when a mechanic received fatal injuries when he fell down an open hoist well onto a concrete floor located 39 feet below his work area.

James Maynard, Foreman, was present at the work area immediately prior to the accident and helped a witness stabilize a ladder while the victim climbed it to perform the work necessary to remove a 12 inch I-beam. Maynard observed the victim climbing the ladder without fall protection and was aware that the work was to be accomplished from a elevated location above the third floor of the plant and was also located adjacent to an open hoist well that was 39 feet above the basement floor. Maynard engaged in aggravated conduct constituting more than ordinary negligence. This violation is an unwarrantable failure to comply with a mandatory standard.

APPENDIX A

List of persons furnishing information and/or present during the investigation:

Alpha Natural Resources

Independence Coal Company Inc., Coal River West (CRW), Liberty Processing
(Liberty) Officials and Employees

Eric Salyer.....	President/CRW
Phillip Saunders	Vice President/CRW
Brian Keaton	Alpha Corporate Safety
Gary Frampton	Alpha Safety
Lewis Sheppard, Jr.....	Safety Director/CRW
Joshua Peters	Superintendent/Liberty
James Maynard.....	Plant Foreman/Liberty

West Virginia Office of Miners' Health, Safety and Training

John Kinder	Inspector-at-Large
Danny Jarrell.....	Assistant Inspector-at-Large
Eugene White.....	Deputy Director
Gregory Raines	District Inspector
Bill Gillenwater.....	District Inspector
Barry Koerber	Assistant Attorney General

Mine Safety and Health Administration

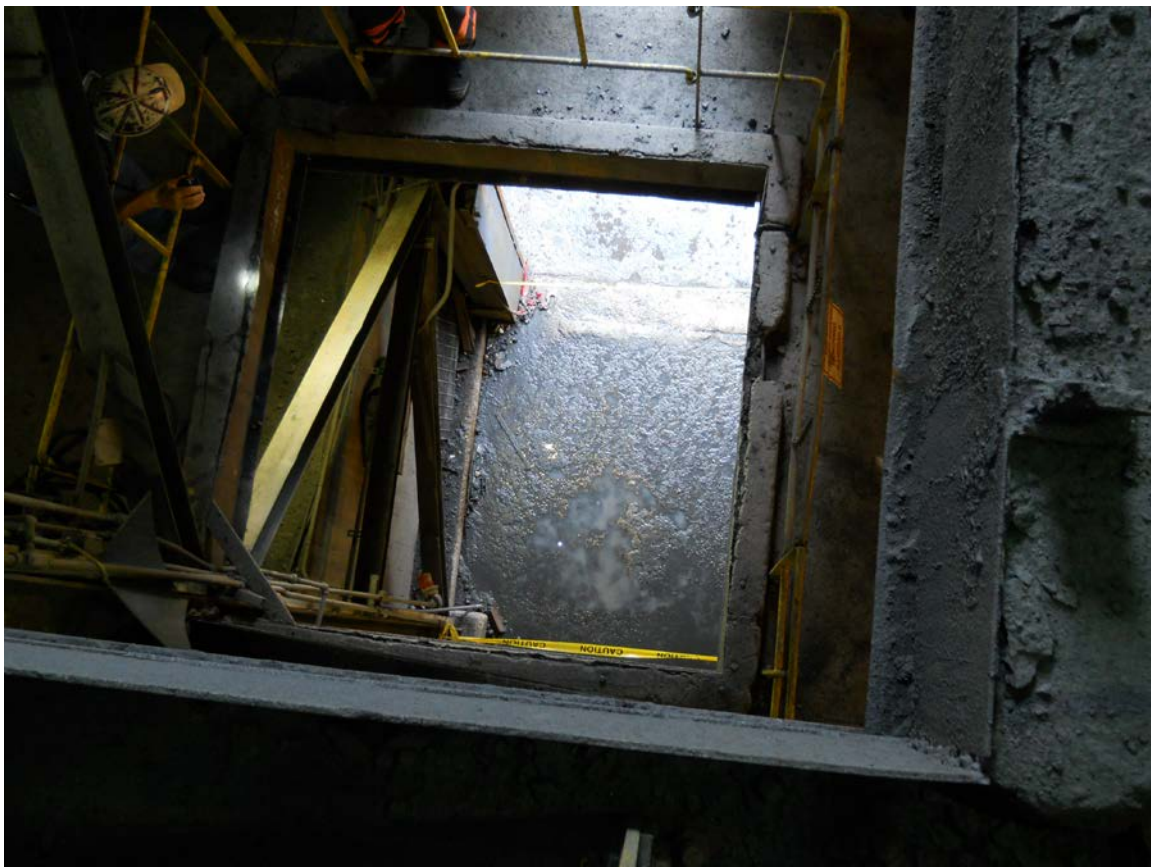
Andrew Sedlock.....	CMS&H Surface Specialist
Ronnie Sutphin	CMS&H Inspector
Elmer Brown.....	CMS&H Inspector
Terry Price	Supervisory CMS&H Inspector

APPENDIX B

List of persons Interviewed

Brandon Geer	Mechanic
James Knoble	Delivery
Mark White	Thickener Operator
Norman Roberts	Pipe Fitter
Roger Hamilton	Lead Pipe Fitter
Joshua Peters	Superintendent
James Maynard	Plant Foreman

APPENDIX C
Photographs of the Accident Scene



APPENDIX C Cont'd



APPENDIX C Cont'd.



APPENDIX C Cont'd.



APPENDIX D

Victim Information

Accident Investigation Data - Victim Information

U.S. Department of Labor



Event Number: 6 2 9 6 8 0 9

Mine Safety and Health Administration

Victim Information: 1

1. Name of Injured/Ill Employee: Clyde Dolin		2. Sex M	3. Victim's Age 57	4. Last Four Digits of SSN:	5. Degree of Injury: 01 Fatal
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: 05/17/2012 b. Time: 13:11			7. Date and Time Started: a. Date: 05/17/2012 b. Time: 7:00		
8. Regular Job Title: 104 Plant Mechanic		9. Work Activity when Injured: 013 Working from ladder		10. Was this work activity part of regular job? Yes ☒ No ☐	
11. Experience: a. This Work Activity: 39 0 0		b. Regular Job Title: 39 0 0		c. This Mine: 13 0 0	
12. What Directly Inflicted Injury or Illness? 071 Unsecured ladder without fall protection		13. Nature of Injury or Illness: 370 Crushing injury from 39 foot fall			
14. Training Deficiencies: Hazard: New/Newly-Employed Experienced Miner: Annual: Task:					
15. Company of Employment: (If different from production operator) 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: 9999 None (No Union Affiliation)		

Victim Information:

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 ☐ No ☐	
11. Experience: a. This Work Activity:		b. Regular Job Title:		c. This Mine:	
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:		

Victim Information:

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 ☐ No ☐	
11. Experience: a. This Work Activity:		b. Regular Job Title:		c. This Mine:	
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:		

12