

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Underground
(Coal)

Fatal Machinery Accident
September 28, 2024

Leer Mine
ACI Tygart Valley
Thornton, Taylor County, West Virginia
ID No. 46-09192

Accident Investigators

Ronald Sheets II
Mine Safety and Health Inspector

Jason Rinehart
Mine Safety and Health Specialist

Originating Office
Mine Safety and Health Administration
Morgantown District
604 Cheat Road
Morgantown, WV 26508
Carlos Mosley, District Manager

TABLE OF CONTENTS

OVERVIEW	1
GENERAL INFORMATION	1
DESCRIPTION OF THE ACCIDENT	2
INVESTIGATION OF THE ACCIDENT	3
DISCUSSION	3
Accident Location	3
Longwall Shield Advancement	3
Examinations	4
Training and Experience	4
ROOT CAUSE ANALYSIS	5
CONCLUSION	6
ENFORCEMENT ACTIONS	7
APPENDIX A – Persons Participating in the Investigation	8
APPENDIX A – Persons Participating in the Investigation continued	9
APPENDIX B – Map of the Accident Scene	10
APPENDIX C – Photographs of Nylon Rope and Hook Sling	11



OVERVIEW

On September 28, 2024, at approximately 7:50 a.m., Colton Walls, a 34-year-old electrician with 14 years of mining experience, was seriously injured while advancing longwall shields. Two longwall shields were connected with a nylon rope and hook sling. When the sling broke, a portion of the sling struck Walls. He died from his injuries on October 5, 2024.

The accident occurred because the mine operator did not: 1) have adequate written guidance to ensure the safe advancement of the longwall shields when adverse conditions were encountered and connecting devices were used to prevent the shields from leaning and 2) train the miner on how to ensure safe advancement of the longwall shields when adverse conditions occur and connecting devices are used to prevent the shields from leaning.

GENERAL INFORMATION

ACI Tygart Valley owns and operates the Leer Mine, an underground coal mine in Thornton, Taylor County, West Virginia. The mine employs 574 miners and operates two nine-hour production shifts and one maintenance shift, seven days per week. The mine extracts bituminous coal using six continuous mining machine units and one longwall mining unit in the Kittanning

coal seam with an average mining height of 96 inches. Belt conveyors transport the coal from the mining units to the surface.

The principal management officials at Leer Mine at the time of the accident were:

Gaither Frazier
Ray Curry
Marvin Cochran
Josh Leichliter

General Mine Manager
Mine Manager
Mine Superintendent
Safety Director

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on September 25, 2024. The 2023 non-fatal days lost injury incident rate for the Leer Mine was 0.33, compared to the national average of 3.25 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On September 27, 2024, at 11:00 p.m., Walls started his shift and participated in a safety instruction meeting given by Ryan McKinney, Weekend Shift Foreman. This shift was a maintenance shift. According to records, the midnight shift longwall maintenance crew consisted of Walls; Daniel Sloan, Midnight Shift Maintenance Foreman and Emergency Medical Technician (EMT); Travis Knotts, Apprentice Electrician; Derek Born, Longwall Foreman (EMT); Christian Myers, Shield Operator; and Dakota Dixon, Longwall Electrician. The crew entered the mine and traveled to the 10 Left longwall section and arrived at approximately 12:10 a.m. on September 28, 2024. The shearer was located in the middle of the longwall face and the crew started mining towards the headgate. The crew stopped mining when the shearer reached the headgate to perform maintenance on the shearer. Sloan also instructed the crew to repair longwall shields and perform other maintenance on the equipment during the shift. The work was completed at approximately 7:20 a.m.

The midnight shift longwall maintenance crew primarily performs maintenance, but the crew routinely mines coal before the dayshift longwall production crew arrives on the section. Knotts started the shearer and mined to the longwall tailgate. Walls was following the shearer making sure the shields were advancing behind the shearer. The shearer cut out at the tailgate entry and mined back toward the headgate to the No. 146 shield. Walls went inby the shearer to start advancing the tailgate shields and Knotts started mining back toward the tailgate for the second cutout.

According to interviews, at approximately 7:50 a.m., Knotts heard a loud boom and turned off the shearer near the No. 169 shield. He went to investigate the noise and found Walls unconscious and breathing with an injury to the back of his head. Walls was lying across the No. 172 shield pontoons with his head against the tailgate side of the No. 171 shield pontoon. Knotts called for help on the radio and rendered aid to Walls. Dixon and Sloan were on the longwall face and heard the radio call for help. They went to the tailgate to assist Knotts. Born also heard the radio call for help and arrived at the tailgate shortly after to assist.

The dayshift longwall production crew was traveling in a personnel carrier toward the 10 Left longwall section when they heard the call for help on the radio. Jeffrey Underwood, Dispatcher, instructed them to go to the longwall face from the 9 Left Tailgate section (9 Left) to help with an injured miner. Daniel Ausherman, Longwall Foreman and EMT; Cody Hershman, Shearer Operator; John Painter, Shield Operator; Christopher Stone, Shearer Operator; Allen Corder, Shield Operator, traveled to No. 7 block in 9 Left and arrived at the No. 174 shield on the longwall face at approximately 8:05 a.m. Walls was placed on a backboard and transported out the 9 Left entries to a personnel carrier. Ausherman, Born, Sloan, and Hershman rode with Walls and continued to administer first aid as they traveled to the portal bottom. Walls was transported to the surface on the elevator and his care was transferred to Taylor County Emergency Medical Services on the surface. Walls was transported to Ruby Memorial Hospital in Morgantown, West Virginia for treatment. On October 5, 2024, at 4:16 p.m., Dr. Matthew Smith, M.D., pronounced Walls dead.

INVESTIGATION OF THE ACCIDENT

On September 28, 2024, at 8:07 a.m., Ralph Frazee, Construction Foreman, called the Department of Labor National Contact Center (DOLNCC) to report a serious accident. The DOLNCC notified Stephen Wilt, Supervisory Mine Safety and Health Inspector. Wilt contacted Tyler Peddicord, Assistant District Manager, who contacted Michael Stark, Staff Assistant, and Ronald Tulanowski II, Supervisory Mine Safety and Health Inspector. Tulanowski assigned Ronald Sheets II, Mine Safety and Health Inspector, to investigate the accident. Sheets traveled to the mine and at 9:20 a.m., issued an order under the provision of Section 103(k) of the Mine Act to ensure the safety of the miners and preservation of evidence. Peddicord assigned Jason Rinehart, Mine Safety and Health Specialist, to travel to the mine to investigate the accident. At approximately 10:40 a.m., Rinehart arrived at the mine. At approximately 3:30 p.m., Derek Bragg, Supervisory Mine Safety and Health Inspector arrived at the mine and participated in the preliminary interviews.

MSHA's accident investigation team, along with the West Virginia Office of Miners' Health, Safety, and Training, conducted an examination of the accident scene, interviewed miners and mine management, and reviewed conditions and work practices relevant to the accident. See Appendix A for a list of persons who participated in the investigation.

DISCUSSION

Accident Location

The accident occurred on the 10 Left longwall face at the tailgate shields.

Longwall Shield Advancement

The longwall face has 174 shields and most of the shields are sequentially advanced by programmed automation. The headgate and tailgate shields are routinely lowered, advanced, and set individually in the manual mode using adjacent shield controls however, they can be cycled individually in an automatic lower, advance, and set mode from adjacent shields.

Based on testimony, on an afternoon shift, on September 27, 2024, the longwall encountered soft and uneven mine floor conditions in the tailgate that caused the tailgate shields to lean towards the tailgate entry.

Jeffrey Borgman, Longwall Foreman, placed a chain and hook sling between the No. 174 and No. 173 shields and a nylon rope and hook sling between the No. 173 and No. 172 shields to help keep the shields from leaning as they were advanced (see Appendix B). The slings help guide the shield as the ram jacks advance the shields. The slings remained attached to the shields at the end of the afternoon shift. The investigators traveled to the tailgate shields and determined that the mine floor had leveled out and the shields were not leaning at the time of the accident.

Walls was the first person to advance the tailgate shields after the slings were installed. Based on the longwall computer data, Walls first advanced the No. 174 shield and then automatically advanced the No. 173 shield from the No. 172 shield controls. Investigators concluded that the nylon rope and hook sling were overextended and broke when the No. 173 shield was advanced and set in automatic mode. When the nylon rope broke a portion of the sling struck Walls. Investigators found one portion of the nylon rope and hook sling on the tail drive and the other portion of the sling consisting of the hook and D-ring on the mine floor near Walls' location (see Appendix C). Investigators concluded that Walls was struck by the hook and/or D-ring portion of the sling.

The mine operator did not have a written policy or procedure in place to address safe operation and advancement of the longwall shields when adverse ground conditions were encountered. The mine operator used the manufacturer's pocket guide for the operation of the longwall shield controls but this guide does not address adverse geological conditions. Investigators determined this contributed to the accident.

Examinations

The investigation team reviewed the 10 Left section examination records and found them to be compliant. Investigators determined that all examinations were completed and adequate and did not contribute to the accident.

Training and Experience

Walls had 14 years of mining experience, including over seven years at the Leer Mine. Investigators reviewed training records and determined Walls received annual refresher training in accordance with MSHA Part 48 training regulations.

Walls received task training on longwall shields on March 15, 2024. However, this training did not include how to advance the longwall shields when adverse conditions were encountered and connecting devices were being used to prevent the shield from leaning. Investigators determined this contributed to the accident.

ROOT CAUSE ANALYSIS

The accident investigation team conducted an analysis to identify the underlying causes of the accident. The team identified the following root causes, and the mine operator implemented the corresponding corrective actions to prevent a recurrence.

1. Root Cause: The mine operator did not have a written policy or procedure in place to ensure the safe advancement of the longwall shields when adverse conditions were encountered and connecting devices were used to prevent the shields from leaning.

Corrective Action: The mine operator developed and implemented the following written procedures to be followed when shields are connected with slings during shield advancement:

The shield operator will position himself at least three shields away from the shields that are connected with a device, prior to moving either of the connected shields. For example, if shields 208 and 207 are connected, the shield operator may not move either shield 208 or 207 from any position closer than shield 204 or 211. The shield will be manually operated during this time.

The shield operator will ensure that his body position is not in the direct line of fire should the connecting device fail, regardless of the distance from the connecting device.

The connecting device will only be removed once the connected shields have been advanced and pressurized to the roof and there is no tension on the connecting device.

Only suitable connecting devices, without rings, will be used on the active longwall face.

All employees involved with advancing shields using a connecting device will be instructed on the contents of this plan.

2. Root Cause: The mine operator did not train the miner on how to ensure safe advancement of the longwall shields when adverse conditions occur and connecting devices are used to prevent the shields from leaning.

Corrective Action: The mine operator trained all miners that perform advancement of longwall shields on the new written procedures.

CONCLUSION

On September 28, 2024, at approximately 7:50 a.m., Colton Walls a 34-year-old electrician with 14 years of mining experience, was seriously injured while advancing longwall shields. Two longwall shields were connected with a nylon rope and hook sling. When the sling broke, a portion of the sling struck Walls. He died from his injuries on October 5, 2024.

The accident occurred because the mine operator did not: 1) have adequate written guidance to ensure the safe advancement of the longwall shields when adverse conditions were encountered and connecting devices are used to prevent the shields from leaning and 2) train the miner on how to ensure safe advancement of the longwall shields when adverse conditions occur and connecting devices were used to prevent the shields from leaning.

Approved by:

Carlos Mosley
District Manager

Date

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to ACI Tygart Valley.

An accident occurred on September 28, 2024, at approximately 7:50 a.m. This order is being issued under the authority of the Federal Mine Safety and Health Act of 1977, under Section 103(k) to insure the safety of all persons at the mine, and requires the operator to obtain the approval of an authorized representative of MSHA of any plan to recover any person in the mine or to recover the mine or affected area. The operator is reminded of the obligation to preserve all evidence that would aid in investigating the cause or causes of the accident in accordance with 30 CFR 50.12.

The miner died from his injuries on October 5, 2024.

2. A 104(a) citation was issued to ACI Tygart Valley for a violation of 30 CFR 48.7(a).

On September 28, 2024, a fatal accident occurred at this mine while longwall shields were being advanced. The mine operator did not provide adequate task training to instruct miners on how to maintain longwall shields in safe operating condition when adverse ground conditions were encountered and connecting devices were being used to prevent the shields from leaning.

APPENDIX A – Persons Participating in the Investigation

ACI Tygart Valley

Douglas Conaway	Vice President of Safety
Gaither Frazier	General Mine Manager
Ray Curry	Mine Manager
Marvin Cochran	Mine Superintendent
Brad Collins	Mine Foreman
Josh Lechlitter	Safety Director
Michael Frazier	Longwall Coordinator
Daniel Ausherman	Longwall Foreman
Derek Born	Longwall Foreman
Jeffrey Borgman	Longwall Foreman
Ralph Frazee	Construction Foreman
Ryan McKinney	Weekend Shift Foreman
Daniel Sloan	Maintenance Foreman
Kermit Melvin	Mine Engineer
Dakota Dixon	Longwall Electrician
Travis Knotts	Apprentice Electrician
Jacob Phillips	Belt Examiner
Cody Hershman	Shearer Operator
John Painter	Shield Operator
Allen Corder	Shield Operator
Jacob Underwood	Outby Utilityman
Christopher Stone	Shearer Operator
Thomas Melton	Outby Beltman
Benjamin Wilt	Longwall Mechanic
Brandon Piper	Shield Operator
Samuel Gillum	Shield/Shearer Operator
Christian Myers	Shield Operator
Jeffrey Underwood	Dispatcher

West Virginia Office of Miners' Health, Safety, and Training

Frank Foster	Director
Edward Peddicord	Inspector at Large
Tadd Rankin	Assistant Inspector-at-Large
Jason Adkins	Assistant Attorney General
Nathan Sharp	Mine Inspector
Adam Matlick	Mine Inspector
David McCullough	Safety Instructor

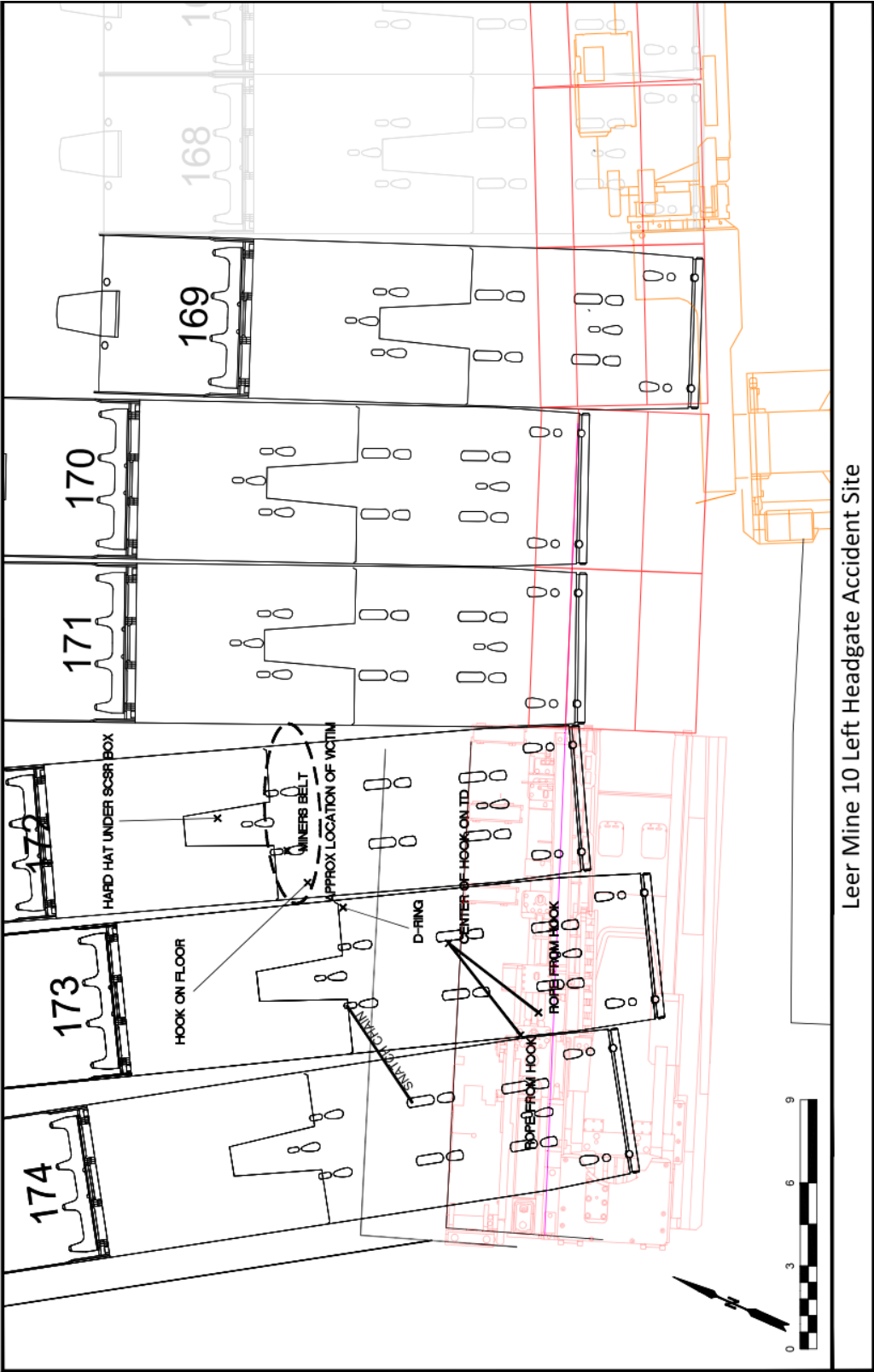
APPENDIX A – Persons Participating in the Investigation continued

Mine Safety and Health Administration

Derek Bragg
Joedy Gutta
Jason Rinehart
Ronald Sheets II

Supervisory Mine Safety and Health Inspector
Civil Engineer
Mine Safety and Health Specialist
Mine Safety and Health Inspector

APPENDIX B – Map of the Accident Scene



Leer Mine 10 Left Headgate Accident Site

APPENDIX C – Photographs of Nylon Rope and Hook Sling



Sling Portion Found on Mine Floor



Sling Portion Found on the Tail Drive