

**Report of Fatality
Electrocution Accident
Underground Coal Mine
September 1, 2022**

**Kanawha Eagle Mining, LLC
Coalburg #1 Tunnel Mine
Permit Number U00500302B**

**Region IV Office
337 Industrial Drive
Oak Hill, West Virginia 25901
McKennis P. Browning, Inspector-at-Large**

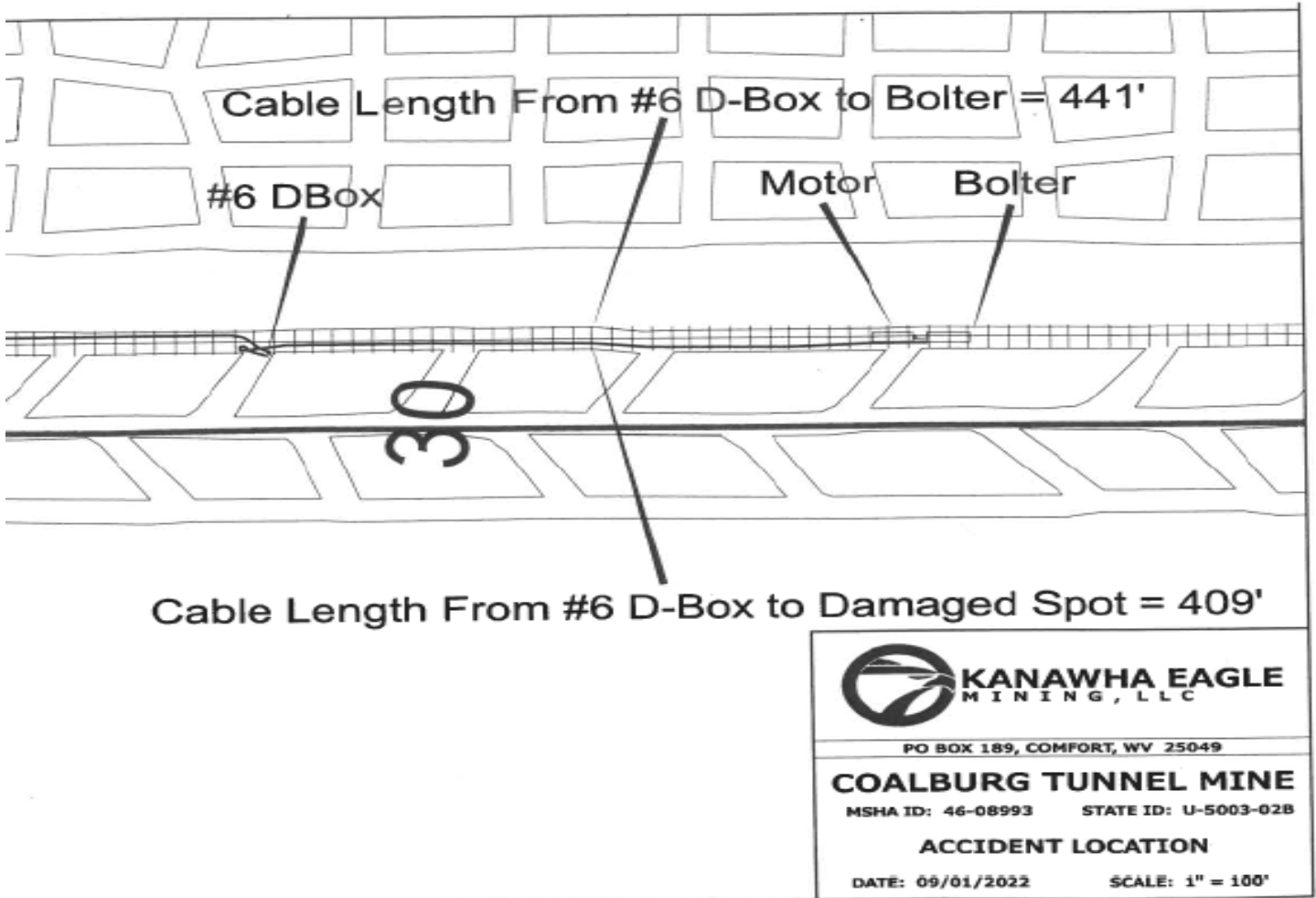
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Scene Picture



Map of Accident Scene and Surrounding Area



Rope Hanger Metal Hook Imbedded in #930010 Roof Bolter Trailing Cable

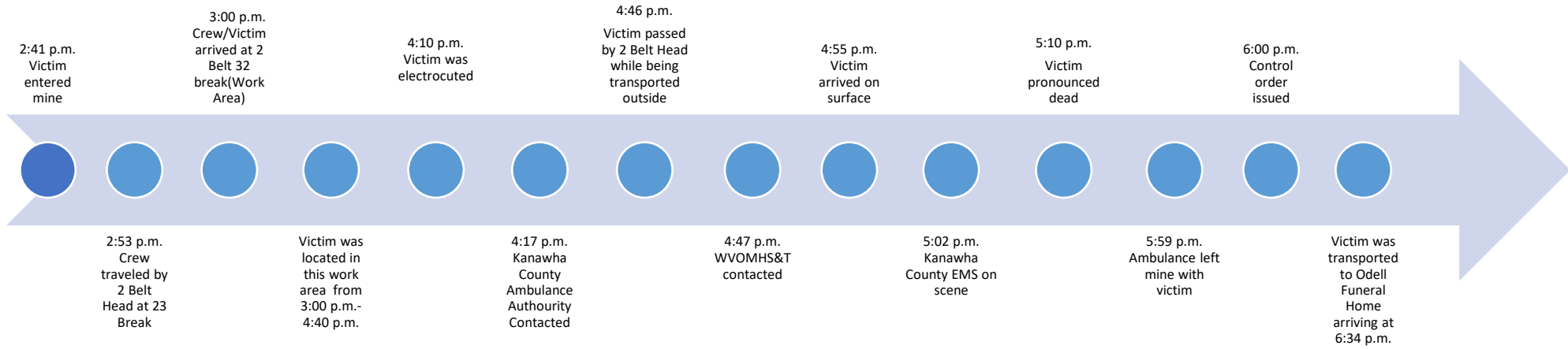


September 1, 2022

Kanawha Eagle Mining, LLC

Coalburg #1 Tunnel Mine

Accident Timeline



REPORT OF FATALITY

ELECTROCUTION ACCIDENT INVESTIGATION

Kanawha Eagle Mining, LLC

Coalburg #1 Tunnel Mine

WV PERMIT NUMBER U00500302B

GENERAL INFORMATION

This report is based on an investigation conducted in accordance with Title 36, Series 19, Section 7.1 of the West Virginia Code of State Rules.

Kanawha Eagle Mining, LLC was permitted to operate the Coalburg #1 Tunnel Mine on October 28, 2015. The mine employs a total of 7 people on 3 shifts. The mine utilizes conveyor belt systems to transport raw coal to the Kanawha Eagle Coal Preparation Plant. Miners are also tasked with rehabilitation work pertaining to the mine roof. The mine operates 3 shifts daily. The miners work a traditional schedule consisting of 5 working days per week.

Mr. Kristofer L. Ball, a certified underground coal miner from Harts, WV, started his employment at the Coalburg #1 Tunnel Mine on July 25, 2022. Mr. Ball received a class 06 certified underground miner certification on February 7, 2020. The last record of annual retraining for Mr. Ball was dated February 21, 2022, which is current.

Mr. Ball was electrocuted on September 1, 2022, at 4:10 p.m. The accident occurred while Mr. Ball was operating the #709 Brookville Locomotive tasked with pulling the trailing cable slack for the #930010 Fletcher Roof Bolter.

The Kanawha County Metro (911) received a call from the Coalburg #1 Tunnel Mine at 4:15 p.m. Kanawha County Metro contacted Kanawha County Emergency Ambulance Authority at 4:17 p.m. Charles Moles, Assistant Inspector-at-Large for the West Virginia Office of Miners' Health, Safety and Training (WV OMHS&T) Region Four office was notified of the accident by Homeland Security at 4:47 p.m. Charles Moles contacted McKennis Browning, Inspector-at-Large, immediately after being made aware of the accident. An Investigation Control Order, Title 36, Series 19, Section 7.1, was issued verbally by Travis Dorsey, Electrical Inspector for the Region Four Office, at 6:00 p.m. to Don Stollings, General Mine Foreman at the Coalburg #1 Tunnel Mine. Charles Moles immediately dispatched Jeff Davis, Chief Electrical Inspector for WV OMHS&T, along with Region Four inspectors Travis Dorsey and Steve Bowles. They were later joined by Eugene White, Director of WV OMHS&T; McKennis Browning, Inspector-at-Large for Region Four; Charles Moles, Assistant Inspector-at-Large for Region Four; and Inspector Gene Stewart. Inspector Jeremy Ball also assisted with the investigation on September 2, 2022.

DESCRIPTION

The Coalburg #1 Tunnel Mine rehabilitation crew started their shift at 2:00 p.m. on September 1, 2022. Tracking logs indicate the crew entered the mine portal at 2:41 p.m. According to tracking logs the crew traveling on #956 Rail Mantrip passed 2 belt head 23 crosscut at 2:53 p.m. (location of the last tracking reader before the work area) and proceeded inby to the work area at 32 crosscut arriving at approximately 3:00 p.m. The work area is 1,320 feet inby 2 belt head, 23 crosscut which is the location of the last tracking reader that was passed while traveling inby to the work area.

According to tracking logs and witness statements, three men (Kristofer Ball, Shannon Gartin, and Arthur Muncy) were in the general work area at 32 crosscut in the track entry. Kevin (Don) Gibson and Tracy Adams also traveled to the rehabilitation work area at 3:00 p.m. then immediately proceeded back to the mine portal to gather supplies for another work assignment.

At the time the accident occurred, Mr. Ball was in the operator compartment of the #709 Brookville Locomotive and had just completed the task of pulling the trailing cable slack for the #930010 Fletcher Roof Bolter. Mr. Gartin along with Mr. Muncy had been assisting in the task of pulling the trailing cable slack for the #930010 Fletcher Roof Bolter. Mr. Muncy was located outby the victim adjacent to the #6 D-Box in 29 crosscut track entry along 2 belt. Mr. Muncy was tasked with watching the trailing cable slack as it was pulled by the #709 Brookville Locomotive. Mr. Gartin was located adjacent to the victim at the #709 Brookville Locomotive in 32 crosscut, 2 belt and was also watching the trailing cable as it was pulled with the #709 Brookville Locomotive operated by the victim Mr. Ball. Mr. Adams and Mr. Gibson were located at 2 belt head looking for supplies for another work assignment. Mr. Adams stated that he was at 2 belt head at the time of the accident when Mr. Muncy flagged him to come inby, he immediately traveled inby to the #709 Brookville Locomotive where the accident had occurred. Mr. Gibson was with Mr. Adams in the #956 Rail Mantrip when they were flagged and traveled to the scene of the accident.

According to testimony, Mr. Gartin stated that he told Mr. Ball to take a break and that Mr. Ball had laid back in the operator compartment to rest. He then reached out of the compartment with his left hand and grabbed the #930010 Fletcher Roof Bolter cable that was hanging from the canopy of the #709 Brookville Locomotive. Mr. Ball had been holding a conversation with Mr. Gartin until this time. Mr. Gartin stated that he knew something had happened, so he walked to the operator compartment that Mr. Ball was occupying to see what he was doing. Mr. Gartin's right arm brushed the victims head on the approach, and he received an electrical shock. At this time Mr. Gartin realized the victim had come in contact with power. Mr. Gartin removed his hard hat and began to strike the victims' hand in an attempt to remove the victims' hand from the trailing cable. Mr. Gartin also started to scream for Mr. Muncy to turn the power off to the #930010 Roof Bolter. Mr. Muncy, who was four crosscuts outby stationed at the #6 D-Box where the #930010 Roof Bolter trailing cable was connected, immediately traveled to the #6 D-Box and switched the circuit breaker to the off position. The #6 D-Box was energized with three phase 480 Volts A.C. and distributed three phase 480 Volts A.C. to the #930010 Roof Bolter through a 2/3 A.W.G. G-GC (Brand: Ameri Cable). Mr. Gartin immediately moved the victim in the compartment of the #709 Brookville Locomotive as soon as the power was disconnected and

began to administer CPR. After disconnecting the power Mr. Muncy traveled inby to the #709 Brookville Locomotive to assist with the victim. Mr. Muncy flagged Mr. Gibson and Mr. Adams who both were traveling on the #956 Mantrip to come to the scene. Mr. Adams then traveled inby to the mine phone to call for the dispatcher to give notification of the accident. Mr. Gibson and Mr. Muncy remained at the scene to assist with the victim, Mr. Gibson took over CPR to relieve Mr. Gartin. The victim was then loaded onto the #956 Mantrip and was transported to the surface. Mr. Adams, Mr. Gibson, Mr. Muncy, and Mr. Gartin all traveled to the surface with the victim. Mr. Gartin continued CPR while on the #956 Mantrip as they traveled to the surface. When the #956 Mantrip arrived at the surface (4:55 p.m.) they were met by Alan Williams, Safety Manager at Kanawha Eagle Mining, who helped remove the victim from the mantrip and then assisted with rendering aid to the victim. Mr. Williams left the victim at approximately 4:56 p.m. to retrieve the AED from the mine office and then traveled from the mine office back to the victim who was laying adjacent to the mine portal. Mr. Gartin placed the AED on the victim once it was made available. According to testimony, Mr. Gartin stated that he never felt a pulse at any time while rendering aid to the victim. After placing the AED on the victim, it did not advise a shock. Mr. Williams returned to the mine office to make calls for EMS and to alert the State and Federal agencies of the accident. Mr. Gartin, Mr. Gibson, and Mr. Williams continued to provide CPR to the victim until Kanawha County EMS arrived on the scene to relieve them from their duties.

The Kanawha County Emergency Ambulance Authority dispatched an ambulance crew at 4:32 p.m. The first Kanawha County EMS personnel arrived at the scene at 5:02 p.m. Kanawha County EMS continued lifesaving efforts until 5:10 p.m. at which time the victim was pronounced deceased. The ambulance arrived later at 5:22 p.m. due to having issues with directions to the mine. The ambulance left the scene at 5:59 p.m. and transported the victim to Odell Funeral Home in Montgomery, WV arriving at 6:34 p.m.

FINDINGS OF FACT

1. Mr. Ball was a class 06, certified underground coal miner; certification number 31474; issued on February 7, 2020.
2. Mr. Ball last attended annual retraining on February 21, 2022.
3. Mr. Ball was a class 07, certified surface coal miner; certification number 14104.
4. Mr. Ball was a class 33, EMT-M; certification number EMTM3834.
5. The accident occurred at the #709 Brookville Locomotive located at 32 crosscut, 2 belt in the track entry. The #709 Brookville Locomotive was coupled to a rail car that was hauling the #930010 Roof Bolter. The roof bolter is powered by three phase 480 Volts A.C.
6. The mine floor was wet and muddy in the area where the accident occurred.
7. Upon arrival the WVOMHS&T investigators found that Mr. Ball had been fatally injured when he contacted the metal hook of a rope hanger that had been placed on the 2/3 G-GC cable that is used to supply power to the #930010 Roof Bolter.
8. During the investigation it was found that the metal hook penetrated the outer cable jacket and the insulation of the red phase lead.

9. During the investigation, a line to neutral voltage reading was taken at the #6 D-Box, at the receptacle, this is the source of power for the #930010 Roof Bolter trailing cable. A reading of 290.3 Volts A.C. was measured with a Fluke multi-meter at the receptacle where the red phase lead was powered.
10. During the investigation, all safety devices in the circuits supplying three phase 480 Volts A.C. to the #930010 Roof Bolter trailing cable were tested. All functioned properly.

CONCLUSION

The victim had just completed the task of pulling up slack for the #930010 Fletcher Roof Bolter with the #709 Brookville Locomotive. The victim had just stopped to take a break while sitting in the operator compartment of the #709 Brookville Locomotive when the victim placed his left hand on an energized metal rope hanger hook that had become imbedded into one phase lead (red phase) of the #930010 Fletcher Roof Bolter trailing cable. This one phase was energized with 290.3 Volts A.C. According to testimony and written statements, the victim had placed the rope hangers on the trailing cable to be used in pulling the cable. These rope hangers, with the metal hooks, are not designed for this task. Although, according to witness testimony, the use of rope hangers for the task of pulling cables is common practice in the industry. Proper pull ropes/cable slings were found during the accident investigation on the #709 Brookville Locomotive.

ENFORCEMENT ACTION

The following enforcement actions were taken as a result of the investigation:

A non-assessed control order was issued in accordance with Title 36, Series 19, Section 7.1 of the West Virginia Mining Rules and Regulations to preserve evidence following the accident.

One contributory violation §22A-2-40(39) states: Trailing cables shall be clamped to machines in a manner to protect the cables from damage and to prevent strain on the electrical connections. No cables will be hung in a manner which will damage the insulation or conductors.

A total of 5 violations have been issued during the investigation 4 of which were not contributory to the fatality.

RECOMMENDATIONS

In accordance with Chapter 22A, Article 1, Section 36 (b). of the West Virginia Code of State Rules, modifications have been made to Kanawha Eagle, LLC, Coalburg #1 Tunnel Mines' Comprehensive Mine Safety Program following the investigation of the fatal accident involving Kristofer L. Ball that occurred on September 1, 2022. The modifications shall include, but not limited to, the following:

1. Miners will be trained on the addendum to the Comprehensive Mine Safety Plan and will be documented on a company form and a MSHA 5000-23 form.

2. Nylon rope hangers will not be used to pull trailing cables. Trailing cables will be pulled with a more suitable type of non-metallic pull rope that prevents damage to cable.
3. All State and Federal laws, rules, and regulations shall be complied with at all times.

ACKNOWLEDGEMENT

The West Virginia Office of Miners' Health, Safety and Training acknowledges the cooperation of employees and management of Kanawha Eagle Mining, LLC, Coalburg #1 Tunnel Mine and the Mine Safety and Health Administration during this investigation.

APPENDIX

- Mine Information Sheet
- Victim Information Sheet

MINE INFORMATION

COMPANY Kanawha Eagle Mining, LLC

MINE NAME Coalburg #1 Tunnel Mine

WV PERMIT U00500302B

ADDRESS 4449 Left Fork Joes Creek, Comfort 25009

COUNTY Boone

DATE PERMIT ISSUED October 28, 2015 WORKING STATUS Active

LOCATION Left Fork Joes Creek Boone, WV

UNION _____ NON-UNION ✓

DAILY PRODUCTION _____ N/A

ANNUAL PRODUCTION TO DATE _____ N/A

TOTAL EMPLOYEES 7 NUMBER OF SHIFTS 3

NAME OF COAL BED Coalburg Seam

SEAM THICKNESS 72 Inches

ACCIDENT INCIDENT RATE _____ LOST TIME ACCIDENTS _____

TYPE OF HAULAGE Conveyor Belt

WV OMHST INSPECTOR Steve Bowles

DATE OF LAST INSPECTION August 18, 2019

NOTIFIED BY Mine Dispatcher

TIME OF NOTIFICATION 4:17 p.m. on September 1, 2022

CMSP – ANNIVERSARY DATE N/A

CMSP – CONTACT PERSON Chris Williams