#### FAI-6316672-1

## UNITED STATES DEPARTMENT OF LABOR MINE SAFETY AND HEALTH ADMINISTRATION Report of Investigation

Underground (Coal)

Fatal Powered Haulage Accident June 3, 2021

Horse Creek Eagle Marfork Coal Company, LLC Naoma, Raleigh County, West Virginia ID No. 46-09091

Accident Investigators

Jamie Shufflebarger Mine Safety and Health Inspector/Electrical Specialist

Larry Bailey Supervisory Mine Safety and Health Inspector

Steven Redden Mine Safety and Health Inspector/Roof Control Specialist

> Originating Office Mine Safety and Health Administration East Region - Beckley District 1293 Airport Road Beckley, West Virginia 25813 David S. Mandeville, District Manager

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## **OVERVIEW**

On Thursday, June 3, 2021, at approximately 9:00 a.m., Nicholas Adkins, a 42-year-old section foreman, died after a shuttle car struck him. The shuttle car operator was tramming the shuttle car to the belt conveyor feeder (feeder).

The accident occurred because the mine operator did not have adequate policies, procedures, and controls to protect miners in haulageways from being contacted by mobile face equipment.

## GENERAL INFORMATION

Elk Run Coal Company, LLC owns Marfork Coal Company, LLC who owns and operates the Horse Creek Eagle mine. Horse Creek Eagle is located 3.7 miles south of Dorothy, West Virginia. The mine operator mines the Eagle coal seam, which averages 48 to 50 inches in height and has a depth of cover of approximately 300 feet. The mine employs 115 miners and operates five days per week with two production shifts each day. The mine operates two continuous mining machine super sections.

The principal officers for Marfork Coal Company, LLC at the time of the accident were:

Jason Whitehead	Chief Operating Officer
Carl Lucas	President
Thomas Hess	General Manager

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on March 29, 2021. The 2020 non-fatal days lost (NFDL) incident

rate for Horse Creek Eagle was 3.30, compared to the national average of 2.97 for mines of this type.

## DESCRIPTION OF THE ACCIDENT

On Thursday, June 3, 2021, at 6:15 a.m., Adkins reported to work for the day shift at the Horse Creek Eagle mine as one of the two section foremen assigned to the No. 2 section. Adkins and his crew entered the mine at 6:31 a.m. traveling on a rail mounted personnel carrier to the No. 2 section. The crew arrived at the section at 7:02 a.m. and spent the first part of the shift completing the section move and preparing the section to begin production.

The day of the accident was the first production day after moving the No. 2 section to a new panel. The new section had two open crosscuts inby the feeder. Adkins and Chris Curry, Section Foreman, had communicated over the wireless radio system and were planning to meet each other to do their 9:00 a.m. production call out to the surface to inform management of the day's production. Adkins was traveling on foot from the No. 4 entry to the No. 5 belt conveyor entry to meet Curry. Curry traveled on foot outby in the No. 6 entry and walked through the crosscut, one crosscut inby the feeder from No. 6 entry to No. 5 entry (see Appendix A).

When Adkins arrived at the belt conveyor entry, Thomas Page, Shuttle Car Operator, was waiting for the No. 3 shuttle car operated by Tim Harless, Shuttle Car Operator, to finish loading coal onto the feeder so Page could tram the No. 2 shuttle car to the feeder. After the coal was loaded onto the feeder, Harless trammed the No. 3 shuttle car inby one crosscut and turned towards the No. 6 entry. After Harless's No. 3 shuttle car cleared the intersection, Adkins crossed the No. 2 shuttle car trailing cable at the trailing cable anchor. Adkins was traveling across the intersection towards the No. 6 entry.

While Adkins was in the intersection of the No. 5 entry, Page trammed the No. 2 shuttle car towards the feeder and struck Adkins, pinning him between the mine floor and the conveyor boom on the shuttle car. Curry, who was on the other side of the intersection of the No. 5 entry, witnessed the accident and began signaling and yelling at Page to stop the No. 2 shuttle car. Curry went to Adkins and called for help over the radio. Curry directed Page to raise the conveyor boom to free Adkins.

After freeing Adkins, Page backed up the No. 2 shuttle car approximately 13 feet to allow emergency medical technicians (EMTs) room to render first aid. Curry, Chris Boulet, Safety Representative, and Bobby Stokes, Shift Foreman, who are also EMTs, began cardiopulmonary resuscitation (CPR), which included using the automated external defibrillator on Adkins, while members of the crew retrieved first aid supplies. Boulet and Stokes assisted others in placing Adkins on a backboard and transported him to the surface where Whitesville Ambulance Service personnel were waiting. Resuscitation efforts continued until 9:48 a.m. when Dr. Weston Childers, Region 1 Medical Command Center Physician, gave the order to cease resuscitation efforts to Hannah Ransom, EMT with Whitesville Ambulance Service.

## INVESTIGATION OF THE ACCIDENT

On June 3, 2021, at approximately 9:30 a.m., Brandon McCoy, Dispatcher, contacted Jim Preece, Assistant District Manager, by telephone. Preece contacted Larry Bailey, Supervisory Mine Safety and Health Inspector, and advised him of the accident. Bailey sent Jamie Shufflebarger, Mine Safety and Health Inspector/Electrical Specialist, to investigate the accident. Shufflebarger and Bailey arrived at the mine at 10:55 a.m. Preece also sent Steven Redden, Mine Safety and Health Inspector/Roof Control Specialist, to the mine. Redden issued an order under the provisions of Section 103(k) of the Mine Act to insure the safety of the miners and preservation of evidence.

Prior to traveling underground to the accident scene, MSHA investigators obtained statements from persons having knowledge of the facts and circumstances surrounding the accident. MSHA obtained training records for all miners involved in the accident, as well as maintenance records for the No. 2 shuttle car.

MSHA performed the accident investigation in conjunction with the West Virginia Office of Miners' Health Safety and Training. See Appendix B for a list of persons who participated in the investigation.

MSHA conducted interviews on June 9, 2021, at the West Virginia Office of Miners' Health Safety and Training in Oak Hill, West Virginia.

## DISCUSSION

## Location of the Accident

The accident occurred in the No. 5 belt conveyor entry on the No. 2 section one crosscut inby the feeder. The mine height in the intersection where the accident occurred was 57 inches. The section averages 48 to 50 inches in height. The mine floor was dry with a slight uphill grade towards the feeder at the accident scene.

## Evaluation of the No. 2 Shuttle Car

The No. 2 shuttle car was a Joy Manufacturing Co. center drive Model 21 SC. It was function tested on June 4, 2021. Investigators tested and determined that the brakes, steering, sounding device, and onboard cameras were all functioning. The load of coal on the shuttle car obstructed the shuttle car operator's view of the offside of the machine at the time of the accident. The onboard camera showed the offside and the shuttle car operator should have been able to see Adkins in the video monitor. The mine operator conducted the last weekly examination of the shuttle car on May 26, 2021, with no hazards recorded in the exam record.

## Examinations

The mine operator conducted the last recorded examination of the No. 2 section from 4:00 AM to 5:06 AM on June 3, 2021. The exam record lists no hazards in all entries except for the No. 5 entry where a damaged roof bolt was identified. The corrective action was to danger off the area.

Training and Experience

Adkins had approximately 17 years of underground mining experience with approximately 14 years at the Horse Creek Eagle mine. Adkins was a certified foreman for nine years. Investigators determined Adkins received training in accordance with MSHA Part 48 training regulations.

Page had 40 years of mining experience with over two years at the Horse Creek Eagle mine. Page has over ten years of experience operating a shuttle car. Investigators determined Page received training in accordance with MSHA Part 48 training regulations.

# ROOT CAUSE ANALYSIS

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

<u>Root Cause</u>: The accident occurred because the mine operator did not have adequate policies, procedures, and controls to protect miners in haulageways from being contacted by mobile face equipment.

<u>Corrective Actions</u>: The mine operator submitted a written action plan to prevent a reoccurrence, which includes the following:

- 1. Detailed procedures for miners to communicate with mobile equipment operators.
- 2. Miners wearing strobe lights while on a working section.
- 3. Ensuring the cameras that are installed on all shuttle cars will be maintained in functioning condition.
- 4. The installation of an approved proximity detection system (PDS) on all shuttle cars at the mine.

The mine operator intends to complete installation of PDS on all shuttle cars at the Horse Creek Eagle mine by November 30, 2021. The written action plan will remain in effect after the PDS installation is completed. Until the PDSs are installed, the following interim provisions will also be implemented:

- (A) A strobe light will be installed on the mine roof at the change-out point in haulageways. As mining occurs and the change-out points move, the shuttle car operators will relocate the strobe light accordingly.
- (B) After any complete stop, shuttle car operators will sound an audible alarm and check the onboard camera before moving their machines.

The mine operator trained all miners on the written action plan and interim provisions.

## CONCLUSION

On Thursday, June 3, 2021, at approximately 9:00 a.m., Nicholas Adkins, a 42-year-old section foreman, died after a shuttle car struck him. The shuttle car operator was traveling to the belt conveyor feeder.

The accident occurred because the mine operator did not have adequate policies, procedures, and controls to protect miners from being contacted by mobile face equipment.

Approved By:

David S. Mandeville District Manager Date

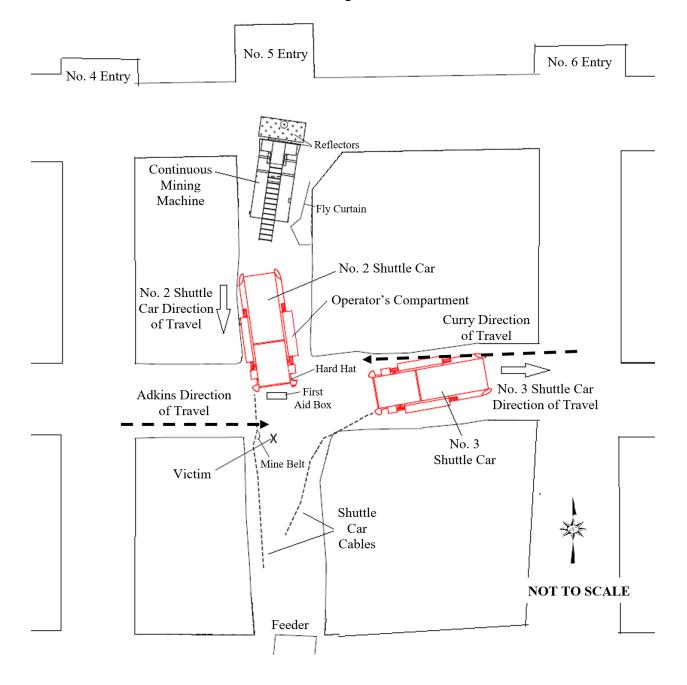
#### ENFORCEMENT ACTIONS

#### 1. A 103(k) order was issued to Marfork Coal Company, LLC.

A fatal accident occurred on June 3, 2021, at approximately 9:00 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. This order prohibits any activity in the 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.

2. A Safeguard under 75.1403 was issued to Marfork Coal Company, LLC.

An accident occurred at this mine on June 3, 2021 when a section foreman received fatal crushing injuries after being struck by the No. 2 shuttle car S/N ET17246 that was in use on the No. 2 section. The accident occurred because the mine operator did not have adequate policies, procedures, and controls to protect miners from being contacted by mobile face equipment. This is a notice to provide safeguards requiring the No. 2 shuttle car and all other shuttle cars at this mine to be provided with an approved and properly maintained proximity detection system. All miners will be trained on the proximity detection system,



# APPENDIX A - Drawing of the Accident Scene

#### APPENDIX B - Persons Participating in the Investigation

#### Marfork Coal Company, LLC

Jason Whitehead Carl Lucas Thomas Hess Paul Thompson Mark Rinchich Richard Cantley Kevin Buzzard Bobby Stokes Chris Curry Chris Boulet Matt Boulet Tim Harless Thomas Page Ronnie Russell Chief Operating Officer President General Manager Maintenance Director Superintendent General Mine Foreman Chief Electrician Shift Foreman Section Foreman Safety Representative Continuous Mining Machine Operator Shuttle Car Operator Electrician

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

Eugene White John Kinder McKennis Browning Bobby Harper Jeffery Davis William Stewart Preston Toney Josh Williams Director Deputy Director Inspector at Large Assistant Inspector at Large Accident Investigator Accident Investigator Accident Investigator Accident Investigator

#### Mine Safety and Health Administration

Larry Bailey Jamie Shufflebarger Steven Redden Supervisory Mine Safety and Health Inspector Mine Safety and Health Inspector/Electrical Specialist Mine Safety and Health Inspector/Roof Control Specialist