

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Crushed, Broken Sandstone)

Fatal Machinery Accident
March 1, 2023

Bizzack Construction LLC (V409)
Lexington, Kentucky

at

Elkhorn Stone
Mountain Aggregates Inc
Elkhorn City, Pike County, Kentucky
ID No. 15-00213

Accident Investigators

Thomas Bower
Mine Safety and Health Inspector

Carlton Beggs
Mine Safety and Health Specialist

George Powers
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Norton District
716 Spring Avenue SE
Wise, VA 24293
Brian Dotson, District Manager

TABLE OF CONTENTS

OVERVIEW	1
GENERAL INFORMATION	1
DESCRIPTION OF THE ACCIDENT	2
INVESTIGATION OF THE ACCIDENT	3
DISCUSSION	3
Location of the Accident	3
Weather	3
Equipment Involved	3
Seat Belt	4
Training and Experience	4
Examinations	4
ROOT CAUSE ANALYSIS	5
CONCLUSION	5
ENFORCEMENT ACTIONS	6
APPENDIX A – Persons Participating in the Investigation	8
APPENDIX B – Aerial View of Accident Location	9
APPENDIX C – Photograph of the Accident Scene	10
APPENDIX D – Photograph of the Equipment Involved	11



OVERVIEW

On March 1, 2023, at approximately 10:30 a.m., Joshua Coleman, a 38 year-old bulldozer operator with over 13 years of mining experience, died when the bulldozer he was operating traveled over an embankment. The bulldozer overturned several times down the embankment before landing on an inactive logging road 303 feet below the active pit. Coleman was ejected from the bulldozer.

The accident occurred because the mine operator and the contractor did not: 1) ensure that the bulldozer operator maintained control of the equipment while it was in motion, and 2) ensure miners wore seat belts while operating mobile equipment.

GENERAL INFORMATION

Mountain Aggregates Inc owns and operates the Elkhorn Stone mine. This is a crushed and broken sandstone mine located in Elkhorn City, Pike County, Kentucky. The Elkhorn Stone mine employs nine miners and operates one ten-hour shift, five days per week. Miners drill and blast the sandstone in an open-contour pit and use haul trucks to transport the broken rock to the primary crusher. Conveyor belts transport the rock to a finishing plant where it is separated and sized for customers. The mine operator contracted Bizzack Construction LLC (Bizzack) to use Bizzack's equipment and employees to extract material from the active pit and deliver it to the plant. Bizzack employs six miners at the Elkhorn Stone mine. Coleman was employed by Bizzack.

The principal management officials at the Elkhorn Stone mine at the time of the accident were:

Thomas Belville
James Bowen
Jason Robinson

Area Operations Manager
Safety Director
Superintendent

The principal management officials for Bizzack at the time of the accident were:

Gary Taylor
Douglas Plummer

President
Vice President

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on October 13, 2022. The 2022 non-fatal days lost incident rate for the Elkhorn Stone mine was zero, compared to the national average of 1.69 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On March 1, 2023, Coleman began his shift at 6:00 a.m. Coleman's normal duties were to operate a Caterpillar D8R bulldozer and a Komatsu PC300 excavator in the active pit area. Coleman used the bulldozer and excavator to prepare benches for drilling and blasting, and to assist a front-end loader operator load haul trucks with the blasted rock for transport to the primary crusher.

At approximately 7:30 a.m., Coleman was using the excavator to prepare a drill bench for future drilling and blasting activities when he called Jason Robinson, Superintendent for Mountain Aggregates Inc. According to interviews, Coleman expressed concerns regarding the bucket on the excavator that he was operating and advised Robinson that he (Coleman) did not think that the maintenance crew performed a good repair on the excavator's bucket. Robinson stated that he advised Coleman to continue operating the excavator.

About 10:00 a.m., Coleman parked the excavator in the pit area and began operating the bulldozer. According to interviews, Coleman trammed the bulldozer, up and out of the pit. Coleman turned the bulldozer around, trammed blade first over an earthen berm, and down onto a road that was under construction for future mining activities. This road also served as a catch bench below the pit. The catch bench stops material from rolling down the slope during blasting activities. The bulldozer overtraveled the right side of the catch bench and went over the embankment. The bulldozer turned over several times as it rolled down the steep hill. The bulldozer landed upright on its tracks on an inactive logging road 303 feet below the catch bench. Evidence indicates that Coleman was ejected from the bulldozer through the back window. Coleman was found 106 feet below the catch bench.

At approximately 10:30 a.m., Robinson came into the pit to meet with Bobby Pinks, Equipment Operator, to evaluate what could be done to finish out the day. Robinson and Pinks looked over the berm on the outside edge of the pit and did not see the bulldozer. Robinson and Pinks saw

Coleman lying down on the hill, so they traveled by foot down the embankment and checked Coleman for a pulse. Coleman did not have a pulse and was unresponsive. Robinson called 911 at 10:32 a.m.

The Elkhorn City Fire Department arrived at the mine at 10:52 a.m. Travis Robinson, Deputy Coroner, observed Coleman over the edge of the catch bench and pronounced him dead at 11:30 a.m.

INVESTIGATION OF THE ACCIDENT

On March 1, 2023, at 10:39 a.m., James Bowen, Safety Director for Mountain Aggregates Inc, called the Department of Labor National Contact Center (DOLNCC). The DOLNCC contacted Jeffrey Webb, Supervisory Mine Safety and Health Inspector. Webb contacted Lloyd Robinette, Jr., Assistant District Manager. Webb also contacted Thomas Bower, Mine Safety and Health Inspector, and sent him to the mine. Robinette contacted Stonewall Eldridge, Supervisory Mine Safety and Health Inspector, who sent George Powers, Mine Safety and Health Inspector, to the mine to assist with the investigation. Robinette sent Carlton Beggs, Mine Safety and Health Specialist, to the mine to assist with the investigation. Robinette assigned Bower as the lead accident investigator.

At 12:15 p.m., Powers arrived at the mine and issued an order under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and preservation of evidence. Eldridge arrived at the mine at 12:18 p.m. and traveled over to the embankment where Coleman was located. Bower, Robinette, and Beggs arrived at the mine at 12:45 p.m. and met with Powers and Eldridge.

MSHA's accident investigation team conducted an examination of the accident scene, interviewed miners, mine management, contractor miners, and contractor 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

Location of the Accident

The accident occurred on a catch bench that was under construction (see Appendix B). The mine operator barricaded off this area, which was directly below the active pit. The catch bench measured 24 feet wide. Coleman trammed the bulldozer approximately 295 feet down the catch bench where the bulldozer traveled over the embankment (see Appendix C).

Weather

The weather at the time of the accident was 59 degrees Fahrenheit with clear skies and a southerly breeze of seven miles per hour. Investigators determined that weather did not contribute to the accident.

Equipment Involved

The bulldozer involved in the accident was a 1998 Caterpillar D8R track-type bulldozer with a Rollover Protective Structure (ROPS) and an enclosed operator's compartment (see Appendix

D). Mark Kvitkovich and Davin Sweeney, Mechanical Engineers from MSHA Technical Support, examined and tested the bulldozer at the mine. As a result of the accident, the bulldozer sustained significant damage to the doors, rear window glass, steering and implement circuit, undercarriage, and fuel and hydraulic tanks. The damage prevented Kvitkovich and Sweeney from testing the steering and implement circuits. The bulldozer operator's compartment and ROPS were intact. The ROPS sustained visible denting; however, there was no damage to the inside of the operator's compartment. Mechanical and hydraulic examinations of the braking system revealed that it was fully functioning. All in-cab controls moved freely without binding and produced the intended movement to their associated linkages and valves. Investigators found the seat belt in the unlatched position. Inspection of the seat belt did not reveal any defects and the seat belt restraint system functioned as intended. Investigators did not identify any mechanical or hydraulic defects that contributed to the accident.

Brandon Alley, Equipment Operator, witnessed the bulldozer traveling forward sometime after 10:00 a.m. Evidence indicated that the blade was in the raised position and the bulldozer turned right for unknown reasons. Coleman was not assigned to use the bulldozer or work on the catch bench at the time of the accident. Investigators were unable to determine why Coleman was operating the bulldozer in that area. There were no members of Bizzack management at the mine at the time of the accident. The mine operator and the contractor did not ensure the bulldozer operator maintained control of the equipment while it was in motion, which contributed to the accident.

Seat Belt

Investigators inspected the seat belt and found no defects. Investigators determined that Coleman was not wearing the seat belt at the time of the accident. The mine operator and the contractor did not ensure miners wore seat belts while operating mobile equipment.

Training and Experience

Coleman had 13 years and 9 months of mining experience, and 7 years and 20 weeks experience as a bulldozer operator. Coleman began working at the Elkhorn Stone mine on June 30, 2022. Investigators reviewed training records and determined that Coleman received new miner training and task training on the Caterpillar D8R in accordance with MSHA Part 46 training regulations.

Examinations

Robinson performed a workplace examination of the pit, highwalls, and haul roads and did not identify any hazards. Investigators determined that the workplace examination was adequate and did not contribute 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 and contractor implemented the corresponding corrective actions to prevent a recurrence.

1. Root Cause: The mine operator and the contractor did not ensure that the bulldozer operator maintained control of the bulldozer.

Corrective Action: The mine operator and the contractor developed and implemented a new written procedure for all equipment used to move material over a highwall or steep embankment that requires using the double-blade method of pushing material. One blade of material will be left at the edge and pushed over with the following blade of material. This will allow the equipment to remain at a safe distance from the edge of the highwall or embankment at all times. The mine operator trained all miners in this new written procedure.

2. Root Cause: The mine operator and the contractor did not ensure miners wore seat belts while operating mobile equipment.

Corrective Action: The mine operator and the contractor held safety meetings with all miners and contractors to retrain them on policies and requirements regarding seat belt use.

CONCLUSION

On March 1, 2023, at approximately 10:30 a.m., Joshua Coleman, a 38 year-old bulldozer operator with approximately 13 years of mining experience, died when the bulldozer he was operating traveled over an embankment. The bulldozer overturned several times down the embankment before landing on an inactive logging road 303 feet below the active pit. Coleman was ejected from the bulldozer.

The accident occurred because the mine operator and the contractor did not: 1) ensure that the bulldozer operator maintained control of the equipment while it was in motion, and 2) ensure miners wore seat belts while operating mobile equipment.

Approved By:

Brian Dotson
District Manager

Date

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Mountain Aggregates Inc.

A fatal accident occurred on March 1, 2023, at approximately 10:30 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 104(a) citation was issued to Mountain Aggregates Inc for a violation of 30 CFR 56.9101.

A fatal accident occurred at this mine on March 1, 2023, when a bulldozer operator was ejected from the cab of the bulldozer he was operating after traveling over the edge of an embankment. The Caterpillar D8R bulldozer (Serial No. 7XM03587) overturned several times while going down the embankment before landing on an inactive logging road, 303 feet below the active pit. The mine operator did not ensure that the bulldozer operator maintained control of the equipment while it was in motion.

3. A 104(a) citation was issued to Bizzack Construction LLC for a violation of 30 CFR 56.9101.

A fatal accident occurred at this mine on March 1, 2023, when a bulldozer operator was ejected from the cab of the bulldozer he was operating after traveling over the edge of an embankment. The Caterpillar D8R bulldozer (Serial No. 7XM03587) overturned several times while going down the embankment before landing on an inactive logging road, 303 feet below the active pit. The contractor did not ensure that the bulldozer operator maintained control of the equipment while it was in motion.

4. A 104(a) citation was issued to Mountain Aggregates Inc for a violation of 30 CFR 56.14130(g).

A fatal accident occurred at this mine on March 1, 2023, when a bulldozer operator was ejected from the cab of the bulldozer he was operating after traveling over the edge of an embankment. The Caterpillar D8R bulldozer (Serial No. 7XM03587) overturned several times while going down the embankment before landing on an inactive logging road, 303 feet below the active pit. This bulldozer was equipped with a rollover protective structure. Observations indicated that the bulldozer operator was not wearing a seat belt at the time of the accident. The mine operator did not ensure that the bulldozer operator wore a seat belt while operating the bulldozer.

5. A 104(a) citation was issued to Bizzack Construction LLC for a violation of 30 CFR 56.14130(g).

A fatal accident occurred at this mine on March 1, 2023, when a bulldozer operator was ejected from the cab of the bulldozer he was operating after traveling over the edge of an embankment. The Caterpillar D8R bulldozer (Serial No. 7XM03587) overturned several times while going down the embankment before landing on an inactive logging road, 303 feet below the active pit. This bulldozer was equipped with a rollover protective structure. Observations indicated that the bulldozer operator was not wearing a seat belt at the time of the accident. The contractor did not ensure that the bulldozer operator wore a seat belt while operating the bulldozer.

APPENDIX A – Persons Participating in the Investigation

Mountain Aggregates Inc

Thomas Belville	Area Operations Manager
James Bowen	Safety Director
Jason Robinson	Superintendent
Donald Belcher	Miners' Representative
Trey Blackburn	Equipment Operator

Bizzack Construction LLC

Thomas Edison	Maintenance Superintendent
Brian Johnson	Maintenance Supervisor
Corey Ratliff	Mechanic/Greaser
Anthony Adkins	Equipment Operator
Brandon Alley	Equipment Operator
Bobby Pinks	Equipment Operator

Boyd Company (Boyd CAT)

Jack Turner	Technical Communicator
William Younce	Service Technician

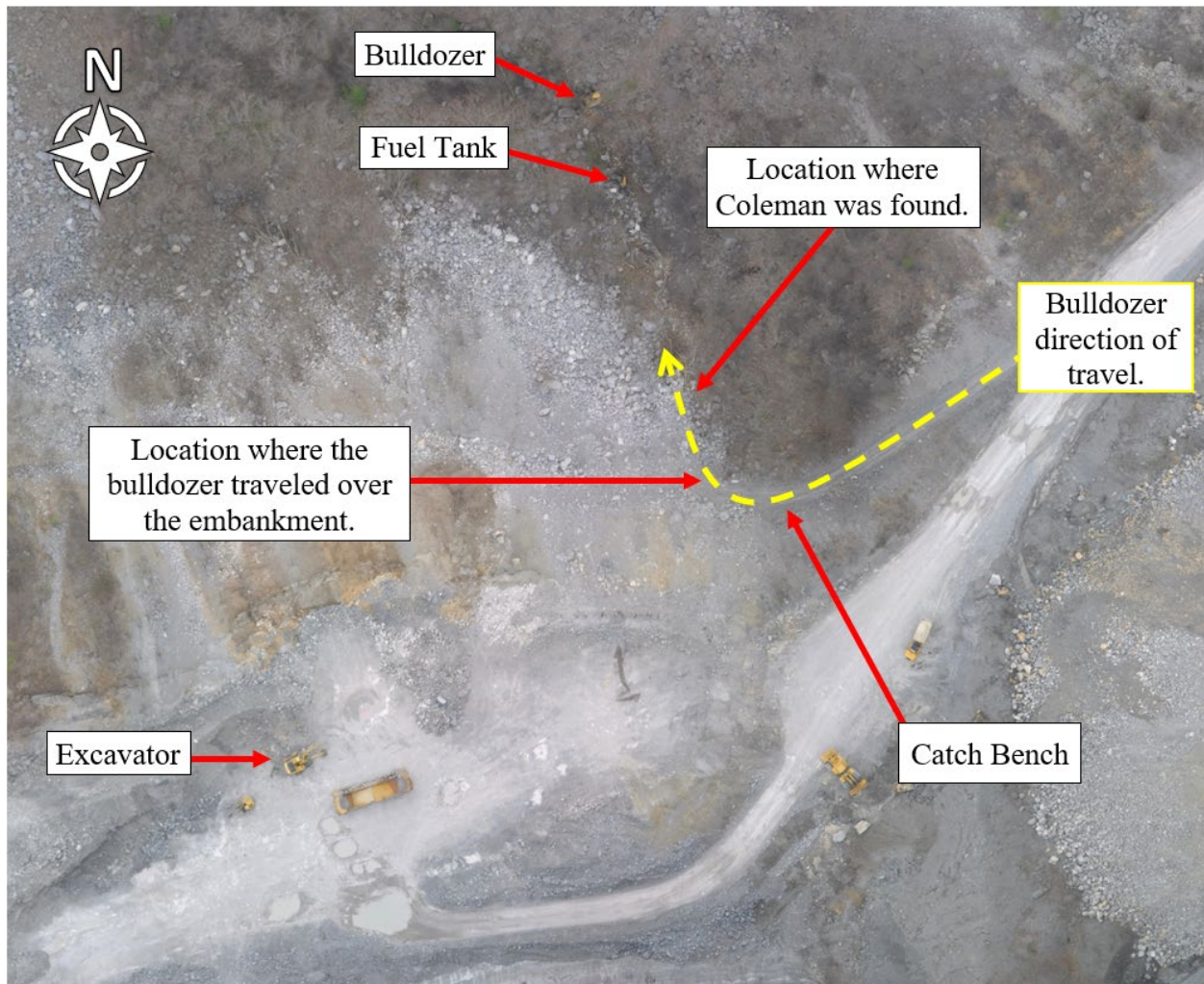
Frasure Heavy Equipment Repair

Keith Frasure	Contractor Mechanic
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Mine Safety and Health Administration

Lloyd Robinette, Jr.	Assistant District Manager
Michael Colley	Staff Assistant
Stonewall Eldridge	Supervisory Mine Safety and Health Inspector
Carlton Beggs	Mine Safety and Health Specialist
Thomas Bower	Mine Safety and Health Inspector
George Powers	Mine Safety and Health Inspector
Mark Kvitkovich	Mechanical Engineer, Technical Support
Davin Sweeney	Mechanical Engineer, Technical Support

APPENDIX B – Aerial View of Accident Location



APPENDIX C – Photograph of the Accident Scene



APPENDIX D – Photograph of the Equipment Involved

