

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Kaolin and Ball Clay)

Fatal Electrical Accident
January 27, 2023

Piedmont Mining, LLC (B2884)
McIntyre, Georgia

at

Wrens Plant
KaMin LLC
Wrens, Jefferson County, Georgia
ID No. 09-00143

Accident Investigators

Scottie Sizemore
Supervisory Mine Safety and Health Inspector

James Fields
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Birmingham District
1030 London Drive
Birmingham, AL 35211
David Allen, Acting District Manager

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OVERVIEW

On January 27, 2023, at approximately 6:25 a.m., CharQuaveiun Bloodsaw, a 23 year-old contract haul truck operator with 48 weeks of mining experience, and Damian Asberry, a 25 year-old contract haul truck operator with seven years of mining experience, were electrocuted. An energized high-voltage power line contacted their haul trucks, resulting in fatal electric shocks when they exited the cabs of their haul trucks.

The accident occurred because the mine operator and contractor: 1) did not install warning signs or barricades to warn miners of the hazard of the overhead high-voltage power lines where the hazard presented was not immediately obvious to miners working in the area, 2) allowed the staging area to be located under, and equipment to be operated within ten feet of, energized overhead high-voltage power lines., and 3) did not conduct workplace examinations.

GENERAL INFORMATION

KaMin LLC owns and operates the Wrens Plant mine. This mine is a surface kaolin and ball clay mine located in Wrens, Jefferson County, Georgia. The Wrens Plant mine processes kaolin from five different pits in the area. The mine operator contracts Piedmont Mining, LLC

(Piedmont) to remove the overburden to expose the kaolin at the Hunnicutt Pit. The overburden is loaded onto off-road haul trucks and hauled to the previous excavation in the pit for use as backfill. Once sufficient kaolin is uncovered, the mine operator contracts another company to excavate and load it onto haul trucks for delivery to the plant for processing. This mining cycle does not occur continuously in any one pit but occurs periodically throughout the multiple pits operated by the Wrens Plant mine. Wrens Plant mine management was not at the Hunnicutt Pit at the time of the accident, and during normal operations, Wrens Plant miners do not routinely work in the Hunnicutt Pit. When a particular pit is operating, only one contracting company works in the pit at a time.

The principal management official at the Wrens Plant mine at the time of the accident was:

Charles Newsome

East Georgia General Manager

The principal management official at Piedmont at the time of the accident was:

Garrett Smith

Vice President

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on November 18, 2022. The 2022 non-fatal days lost incident rate for the Wrens Plant mine was 0.62, compared to the national average of 1.13.

DESCRIPTION OF THE ACCIDENT

On January 27, 2023, at 5:45 a.m., a Piedmont crew consisting of Bloodsaw, Asberry, James Hightower, Leadman/Excavator Operator; and Charlie Robinson, Excavator Operator, arrived at the North staging area of the mine. The crew had just recently returned to this pit to work on January 4, 2023. The crew dropped Robinson off at his excavator and drove a pickup truck to the North staging area where the equipment was parked. Four haul trucks were lined up in the staging area parking lot beneath a 14,400-volt power line in the following order from left to right: No. 76, No. 143, No. 66, and No. 67 (see Appendix A). Bloodsaw started haul truck No. 66 and Asberry started haul truck No. 67. Both returned to the crew's pickup truck with Hightower to allow their haul trucks to warm up. After the haul trucks warmed up, Bloodsaw and Asberry returned to their haul trucks and completed their equipment pre-operational inspections. Hightower drove to the far side of the pit where his excavator was located.

At approximately 6:15 a.m., another Piedmont crew consisting of Lee Evans, Leadman/Bulldozer Operator; Antonio Jones, Excavator Operator; and Trevon Engram and Timothy Jordan, Haul Truck Operators, arrived at the mine. Evans dropped Jones off at his excavator and drove a pickup truck to the North staging area. Jordan and Engram went to haul trucks No. 76 and No. 143, respectively, to conduct pre-operational inspections. Jones then began tramming his bulldozer to the pit.

While still in the staging area, Jordan raised the bed of haul truck No. 76 to drain water that had accumulated from rain on the previous day. As the truck bed lowered, it caught the neutral power line (the lower, un-energized wire of the two running above the staging area). As Jordan

lowered the truck bed and began to pull away, the neutral line pulled the power poles together breaking one of the guy wires (wires that assist in stabilizing utility poles in the ground and keep them upright). This caused the energized line of the power lines to sag down below its normal position. The energized 14,400-volt power line contacted and came to rest across the top of the bed of haul truck No. 66 and across the handrails and catwalk of haul truck No. 67.

The energized power line's contact with the haul trucks created sparks and arcing (visible discharge of electrical current) as the electrical energy ran through the trucks to the ground. Seeing this, Bloodsaw exited the cab of haul truck No. 66 and received a fatal electric shock when he contacted the ground and the truck. Asbury exited the cab of haul truck No. 67 and received a fatal electric shock when he contacted the 14,400-volt power line spanning across the front of the haul truck. After Jordan pulled away in haul truck No. 76 to drive to the pit, the neutral line, previously hung by his raised truck bed, broke. This allowed the poles to relax back to their previous vertical orientation and the energized power line to lift back up to its previous position above the haul trucks. After witnessing the accident, Engram drove haul truck No. 143 to the pit to park it and ran back to the North staging area on foot. Engram saw Bloodsaw and Asberry motionless on the ground and the front passenger side tire of haul truck No. 66 on fire.

At 6:27 a.m., Engram called William Sherrer, Mine Manager for Piedmont, and notified Sherrer of a fire in the staging area. Sherrer called Melissa Raley, Area Safety Manager for Piedmont, who called 911 at 6:35 a.m. At 6:51 a.m., Gold Cross Emergency Medical Services arrived on the site. Raley also called Jefferson Energy, the electric power company, who sent personnel to the mine to remove power from the power lines. Sandra Yelton, Warren County Coroner, responded to the accident scene and pronounced Bloodsaw and Asberry dead at 8:15 a.m.

INVESTIGATION OF THE ACCIDENT

On January 27, 2023, at 6:44 a.m., Raley called the Department of Labor National Contact Center (DOLNCC) to report the accident. At 7:05 a.m., the DOLNCC contacted David Allen, Assistant District Manager. Allen contacted Brian Thompson, Assistant District Manager. Thompson sent Robert Ashley, Supervisory Mine Safety and Health Inspector, and Freddie Trice, Mine Safety and Health Inspector, to the mine. Trice issued a 103(k) order under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and preservation of evidence. Thompson assigned Scottie Sizemore, Supervisory Mine Safety and Health Inspector, as the lead accident investigator, and sent James Fields, Mine Safety and Health Inspector, to assist in the investigation.

Fields arrived at 12:30 p.m. and Sizemore arrived at 5:30 p.m. to conduct the investigation. MSHA's accident investigation team conducted an examination of the accident scene, and interviewed contractor miners, contractor management, and mine management. MSHA also reviewed conditions and work procedures relevant to the accident. See Appendix B for a list of persons who participated in the investigation.

DISCUSSION

Location of the Accident

The accident occurred in the North staging area for the Hunnicutt Pit. The staging area was approximately 140 feet long and 45 feet wide and served as a parking area for four haul trucks and a bulldozer (see Appendix C).

Weather

The weather at the time of the accident was 29 degrees Fahrenheit with clear skies. The accident occurred approximately one hour before sunrise. The area received over two inches of rain the two evenings prior to the accident. The haul trucks were not operated on the day before the accident due to wet and muddy conditions. Investigators determined that weather did not contribute to the accident.

Overhead High-Voltage Power Lines

Since 2017, the contractor allowed contractor miners to operate equipment and park in this area daily during pit operations. Contractor management and members of the mine operator's management and safety department visit this area on a regular basis and were aware of the overhead high-voltage power lines. The power lines existed before the mining of the Hunnicutt Pit began and were in place to provide power to adjacent properties. There were other areas away from overhead high-voltage power line that could have been used as a staging area. The neutral line of the power line was located such that when the truck bed was raised, the bed was higher than the neutral line, making it subject to contact. The truck bed height when raised was over 30 feet in height, but the neutral line was located approximately 27 feet above ground and within approximately one foot of the energized power line.

The hazard of contacting the overhead power lines was not immediately obvious to the contractor miners because the lines could not be seen from inside the cab of the haul trucks due to the orientation of the haul trucks and the power lines. The power lines were less than ten feet away from contact with the haul truck when the bed was raised. The mine operator and contractor did not install warning signs or barricades to warn miners of the hazard of the overhead high-voltage power lines where the hazard presented was not immediately obvious to miners working in the area. The mine operator and contractor also did not ensure that equipment was not operated within ten feet of energized high-voltage power lines. Investigators determined that these factors contributed to the accident.

Equipment Involved

The four haul trucks that were present in the staging area at the time of the accident were Caterpillar 773G off-highway fixed-frame haul trucks. Based on evidence at the accident scene, investigators determined that the operator of haul truck No. 76 raised the bed to drain water and the truck bed got caught on the neutral line as the truck bed was lowered. The tension on the neutral line caused the power poles on either side of the haul truck to lean toward each other. As the poles leaned, the 14,400-volt energized line sagged down until it came to rest across the bed of haul truck No. 66 and across the handrail and catwalk on the front of truck No. 67 (see Appendix A). This allowed high voltage electricity to travel through the haul trucks to the ground, creating an electrocution hazard.

Examinations

According to interviews and records, the mine operator and the contractor did not conduct workplace examinations of the North staging area. An adequate workplace examination would have identified the overhead high-voltage power lines that were less than ten feet away from contact with the haul truck when the bed was raised. It also would have identified the need for signs or barricades warning that the high-voltage power lines were directly above the staging area or signs that prohibited raising the beds of the haul trucks while parked beneath the power lines. Investigators concluded that the lack of workplace examinations contributed to the accident.

Training and Experience

Bloodsaw had 48 weeks of mining experience with 18 weeks of experience operating off-road haul trucks, all with Piedmont. Asberry had seven years of mining experience, including one year and three months of experience operating off-road haul trucks, all with Piedmont.

Bloodsaw and Asberry started working at the Hunnicutt Pit on January 19, 2023. Jordan had over five years mining experience, the last four months being employed with Piedmont. He started working at the Hunnicutt Pit on January 4, 2023. Piedmont included general information about the hazards of overhead power lines in their safety training. Investigators reviewed the training documentation and determined that Bloodsaw, Asberry, and Jordan all received training in accordance with MSHA Part 46 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 causes, and the mine operator and the contractor implemented the corresponding corrective actions to prevent a recurrence.

1. Root Cause: The mine operator and contractor did not install warning signs or barricades to warn miners of the hazard of the overhead high-voltage power lines where the hazard presented was not immediately obvious to miners working in the area.

Corrective Action: The mine operator developed and implemented a new written procedure to prevent work from occurring within a prescribed distance of energized overhead power lines. The mine operator trained all affected miners in the new procedure. The contractor relocated the staging area to where there are no overhead power lines. The contractor also built berm barricades to prevent parking and operation of equipment and machinery beneath the power lines.

2. Root Cause: The mine operator and contractor allowed the staging area to be located under, and equipment to be operated within ten feet of, energized overhead high-voltage power lines.

Corrective Action: The mine operator developed and implemented a new written procedure that includes routine audits of contractors' activities to ensure contractors are complying with MSHA regulations. The procedure prohibits staging equipment with a potential for raising under overhead powerlines. The contractor relocated the staging area to where there are no

overhead power lines. The contractor also built berm barricades to prevent parking and operation of equipment and machinery beneath the power lines.

3. Root Cause: The mine operator and contractor did not conduct workplace examinations.

Corrective Action: The mine operator developed a new written procedure that includes routine audits of the contractors' activities to ensure contractors are complying with MSHA regulations. The audits include a review of contractor completed workplace examinations. The contractor developed and implemented new written procedures to ensure workplace exams are conducted before work occurs, at all workplaces of the mine. The contractor trained all contractor miners in the procedure.

CONCLUSION

On January 27, 2023, at approximately 6:25 a.m., CharQuaveiun Bloodsaw, a 23 year-old contract haul truck operator with 48 weeks of mining experience, and Damian Asberry, a 25 year-old contract haul truck operator with seven years of mining experience, were electrocuted. An energized high-voltage power line contacted their haul trucks, resulting in fatal electric shocks when they exited the cabs of their haul trucks.

The accident occurred because the mine operator and contractor: 1) did not install warning signs or barricades to warn miners of the hazard of the overhead high-voltage power lines where the hazard presented was not immediately obvious to miners working in the area, 2) allowed the staging area to be located under, and equipment to be operated within ten feet of, energized overhead high-voltage power lines., and 3) did not conduct workplace examinations.

Approved By:

David Allen
Acting District Manager

Date

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Piedmont Mining, LLC.

A fatal accident occurred on January 27, 2023, at approximately 6:25 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 KaMin, LLC for a violation of 30 CFR 56.20011.

A fatal accident occurred at the mine on January 27, 2023, when two contract haul truck operators were electrocuted after a 14,400-volt power line contacted their haul trucks. The mine operator did not install warning signs or barricades warning that the high-voltage power lines were directly above the staging area, or warning signs to prohibit raising the beds of the haul trucks while parked beneath the power lines. The hazard from the high-voltage overhead power lines' potential to contact a raised truck bed was not immediately obvious to the miners from inside the cab. The power lines could not be seen from inside the cab of the Caterpillar 773G haul trucks due to the orientation of the trucks and the height of the power line.

3. A 104(d)(1) citation was issued to Piedmont Mining, LLC for a violation of 30 CFR 56.20011.

A fatal accident occurred at the mine on January 27, 2023, when two contract haul truck operators were electrocuted after a 14,400-volt power line contacted their haul trucks. The contractor did not install warning signs or barricades warning that the high-voltage power lines were directly above the staging area, or warning signs to prohibit raising the beds of the haul trucks while parked beneath the power lines. The hazard from the high-voltage overhead power lines' potential to contact a raised truck bed was not immediately obvious to the contract haul truck operators from inside the cab. The power lines could not be seen from inside the cab of the Caterpillar 773G haul trucks due to the orientation of the trucks and the height of the power line. The contractor engaged in aggravated conduct constituting more than ordinary negligence by being aware of the overhead high-voltage power lines in the staging area and allowing contract haul truck operators to operate equipment and park in this area during pit operations since 2017. This violation is an unwarrantable failure to comply with a mandatory standard.

4. A 104(a) citation was issued to the operator KaMin LLC for a violation of 30 CFR 56.12071.

A fatal accident occurred at the mine on January 27, 2023, when two contract haul truck operators were electrocuted after a 14,400-volt power line contacted their haul trucks. The mine operator did not ensure that equipment was not operated within ten feet of energized high-voltage power lines. The Caterpillar 773G off-highway haul trucks were operated in an area where the raised beds of the haul trucks were within ten feet of the overhead high-voltage power line. One of the four trucks parked in the staging area raised the bed of the haul truck and became caught on the neutral line as the bed was lowered.

5. A 104(a) citation was issued to Piedmont Mining, LLC for a violation of 30 CFR 56.12071.

A fatal accident occurred at the mine on January 27, 2023, when two contract haul truck operators were electrocuted after a 14,400-volt power line contacted their haul trucks. The contractor did not ensure that equipment was not operated within ten feet of energized high-voltage power lines. The Caterpillar 773G off-highway haul trucks were operated in an area where the raised beds of the haul trucks were within ten feet of the overhead high-voltage power line. One of the four trucks parked in the staging area raised the bed of the haul truck and became caught on the neutral line as the bed was lowered.

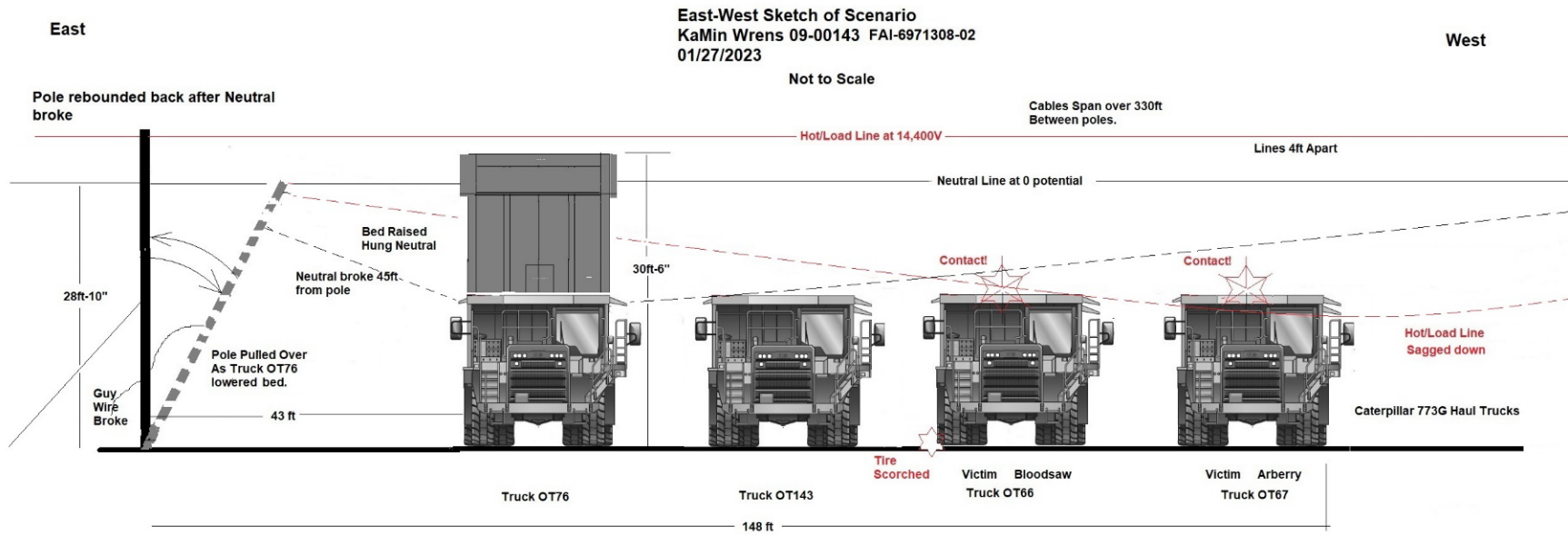
6. A 104(a) citation was issued to KaMin, LLC for a violation of 30 CFR 56.18002.

A fatal accident occurred at the mine on January 27, 2023, when two contract haul truck operators were electrocuted after a 14,400-volt power line contacted their haul trucks. The mine operator did not conduct workplace examinations at the staging area of the mine where work began. Contractor miners used the staging area to access their mobile equipment, which was parked beneath the overhead power lines.

7. A 104(d)(1) order was issued to Piedmont Mining, LLC for a violation of 30 CFR 56.18002.

A fatal accident occurred at the mine on January 27, 2023, when two contract haul truck operators were electrocuted after a 14,400-volt power line contacted their haul trucks. The contractor did not conduct workplace examinations at the staging area of the mine where work began. Contractor miners used the equipment staging area to access their mobile equipment, which was parked beneath the overhead power lines. The contractor engaged in aggravated conduct constituting more than ordinary negligence by being aware of the hazards in the staging area and allowing the hazard of potential contact with the energized overhead powerlines to go uncorrected. This violation is an unwarrantable failure to comply with a mandatory standard.

APPENDIX A – Accident Sequence



APPENDIX B – Persons Participating in the Investigation

KaMin LLC

Charles Newsome	East Georgia General Manager
Kevin Hudson	Environmental, Safety and Health Manager
John Mayer	Environmental, Safety and Health Manager
Burton Patrick	Mining Supervisor
Greg Hatfield	Mining Supervisor
Jonathan Newsome	Mining Supervisor

Piedmont Mining, LLC

Theodore Smith	President and CEO
Garrett Smith	Vice President
Melissa Raley	Area Safety Manager
William Sherrer	Mine Manager
Lee Evans	Leadman/Bulldozer Operator
James Hightower	Leadman/Excavator Operator
Antonio Jones	Excavator Operator
Charlie Robinson	Excavator Operator
Trevon Engram	Haul Truck Operator
Timothy Jordan	Haul Truck Operator

Jefferson Energy

Quincy Thomas	Safety
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Barker & Associates Land Surveyors, INC

Daniel Barker	Surveyor
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Mine Safety and Health Administration

Scottie Sizemore	Supervisory Mine Safety and Health Inspector
James Fields	Mine Safety and Health Inspector

APPENDIX C – Overhead Illustration of the Accident Scene

