

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Sand and Gravel)

Fatal Powered Haulage Accident
September 21, 2021

Lara Truck (C2723)
Albuquerque, NM

at

Bonito Pit
Black Rock Services
Los Lunas, Valencia County, New Mexico
ID No. 29-02450

Accident Investigators

Erin Estrada
Mine Safety and Health Specialist

Ramiro Jimenez
Supervisory Mine Safety and Health Inspector

Originating Office
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William O'Dell, 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
Equipment Involved	3
Weather	4
Training and Experience	4
Examinations	4
ROOT CAUSE ANALYSIS	4
CONCLUSION	5
ENFORCEMENT ACTIONS	6
APPENDIX A – Persons Participating in the Investigation	7
APPENDIX B – Aerial View of the Main Haul Road	8
APPENDIX C – Photograph of the Equipment Involved	9



OVERVIEW

On September 21, 2021, at 1:50 p.m., Gerardo Herrera, a 68 year-old contract truck driver with 20 years of experience, died while operating a haul truck. The victim was found lying in front of his haul truck near the edge of the haul road. The haul truck was upright and facing the opposite direction of the expected travel route.

The accident occurred because the contractor did not: 1) maintain the trailer brakes in a functional condition, and 2) assure that the contract truck driver performed an adequate pre-operational inspection on the haul truck to identify defects prior to placing equipment into operation.

GENERAL INFORMATION

Black Rock Services owns and operates the Bonito Pit mine. Bonito Pit is a surface sand and gravel mine located in Los Lunas, Valencia County, New Mexico. The mine employs twenty miners and operates one 11-hour shift, five days a week. The mine extracts material from the pit with front-end loaders and transports it to the crushing plant. The front-end loaders feed the material into the plant for processing. Front-end loaders also load the processed material into contract haul trucks, including Lara Truck, who employed Herrera as a truck driver. The contract haul trucks transport the processed material to a finished product stockpile for sale to the construction industry.

The principal management officials at the Bonito Pit mine at the time of the accident were:

Kevin Riley
Randell Major

Safety Compliance Training Manager
East of Gate Manager

The principal management official at Lara Truck at the time of the accident was:

Marcos Lara

Owner

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on August 8, 2021. The 2020 non-fatal days lost incident rate for Black Rock Services was zero, compared to the national average of 1.09 for mines of this type. The 2020 non-fatal days lost incident rate for Lara Truck was zero.

DESCRIPTION OF THE ACCIDENT

On September 21, 2021, at 6:00 a.m., Herrera began his shift at Lara Truck's off-site yard. At 6:50 a.m., Herrera got into his assigned haul truck and traveled to Bonito Pit to haul ¾-inch rock from the pit to the loadout/scale area. The main haul road from the pit to the loadout/scale area is approximately 11 miles long.

Marcos Lara, Owner of Lara Truck, arrived at Bonito Pit to pick up a load of rock, and at approximately 10:00 a.m., Lara passed Herrera on the main haul road. At 1:43 p.m., Herrera dumped his 16th load of ¾-inch rock at the stockpile near the loadout/scale area.

At 1:44 p.m., Herrera traveled back to Bonito Pit to pick up another load, going east on the main haul road. At 1:50 p.m., Miguel Aguilar, Truck Driver for Bonito Pit customer, Andre Trucking, was traveling west on the main haul road. Aguilar saw Herrera's haul truck approaching from approximately half a mile away. He observed Herrera's haul truck swerve on the haul road and turn sideways, followed by a big cloud of dust.

Thomas Maes, Water Truck Driver, was traveling east on the main haul road approximately 600 feet behind Herrera. Maes stated that he observed a cloud of dust and, upon arriving at the scene of the accident, observed Herrera laying on the ground in front of his (Herrera's) haul truck. Maes attended to Herrera, who was unresponsive.

David Gamble, Truck Driver for Bonito Pit vendor, Cintas Services, was traveling east on the main haul road behind Maes. Gamble stated that he also saw the cloud of dust and observed Herrera laying in front of the haul truck upon arriving at the scene of the accident. Gamble went to assist Herrera with Maes and noted that Herrera had no pulse.

Based on interviews and observations at the accident scene, investigators believe that Herrera lost control of the haul truck, exited the cab, and was impacted by the haul truck. At some point, the haul truck jack knifed causing the tractor to turn and travel to the side of the road. Based on interviews and observations of investigators, investigators were not able to determine when Herrera exited the cab or whether he was wearing a seat belt. While Herrera was on the haul road and after the tractor's front tires travelled up the elevated side of the road, investigators believe the truck rolled backward over Herrera causing him to be found in front of the truck. This theory is consistent with Herrera's injuries.

At 1:52 p.m., Maes called 911, who dispatched police and emergency medical services to the mine. Maes also called Anthony Casias, Scale House Operator, and informed him of the accident. Casias called Kevin Riley, Safety Compliance Training Manager, and informed him of the accident. At 1:58 p.m., the Valencia County Sheriff's department arrived on-site and administered cardiopulmonary resuscitation (CPR). At 2:06 p.m., Valencia County Emergency

Medical Services arrived on-site and continued CPR. At 5:00 p.m., John Villalobos, Coroner, arrived on-site and pronounced Herrera dead at 5:05 p.m. The autopsy revealed that Herrera's cause of death was blunt force injuries.

INVESTIGATION OF THE ACCIDENT

On September 21, 2021, at 2:10 p.m., Riley called the Department of Labor National Contact Center (DOLNCC). The DOLNCC contacted Joel Gerhard, Supervisory Mine Safety and Health Specialist. Gerhard contacted Brett Barrick, Assistant District Manager, who contacted Ramiro Jimenez, Supervisory Mine Safety and Health Inspector, and sent him to the mine. At 4:22 p.m., Jimenez issued an order under the provisions of Section 103(k) of the Mine Act to assure the safety of the miners and preservation of evidence. Barrick contacted Erin Estrada, Mine Safety and Health Specialist, and assigned him as the lead accident investigator.

On September 22, 2021, at 9:00 a.m., Estrada and Jimenez arrived at the mine site to conduct the investigation. MSHA's accident investigation team conducted an examination of the accident scene, interviewed miners, mine management, the contractor, and other witnesses, and reviewed conditions and work procedures 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 the main haul road, approximately a quarter of a mile east of the three-mile marker (see Appendix B). The main haul road runs east to west and is 41 feet wide and 11 miles long. The main haul road was constructed of hard packed caliche (a natural cement-like substance formed when calcium carbonate binds to other particles such as clay and silt) and is bordered on both sides with shallow drainage swells. The mine operator maintained the main haul road to a consistent grade with a slight center crown and even surfaces. Investigators observed no road hazards. The traffic pattern on the road is right-hand traffic, with a posted 40 mile per hour speed limit.

Equipment Involved

The haul truck involved in the accident is a 2006 Freightliner Columbia Truck/Tractor attached to a MATE bottom dump trailer (trailer) (see Appendix C). Lara Truck rented the trailer from another trucking company two days before the accident. Lara Truck told investigators that the trailer was in good working order at the time they rented it, which would include the condition of the brakes. There were no inspection records found for the trailer stating its operating condition. The trailer has four brakes. MSHA investigators, along with Cesar Miranda, Owner of Daniel's Road Service, a third-party mechanic, found that the four trailer brakes did not function when tested due to mechanical defects. Investigators found all four brakes were not properly adjusted so that the brake pads would not contact the brake drum. One brake was missing a clevis pin (a fastener similar to a bolt) in the brake cam and another brake cam had a bolt inserted into the area where the clevis pin should have been. Also, investigators found a small air leak in the system. The examination of the braking system led investigators to conclude that these conditions existed when the trailer was acquired by Lara Truck. The brakes functioning properly

on the trailer is essential when operated in tandem with a haul truck. If the brakes on the trailer are not engaging properly, when the haul truck attempts to slow down quickly, the haul truck and trailer may jack knife. These brake defects contributed to the accident.

Weather

The weather at the time of the accident was 90 degrees Fahrenheit with clear skies and a breeze of seven miles per hour. Investigators determined that weather did not contribute to the accident.

Training and Experience

Gerardo Herrera had approximately 20 years of commercial haul truck driving experience for over-the-road trucking businesses. Herrera had approximately one month of experience driving a haul truck at Bonito Pit. Herrera drove the equipment involved in the accident for two days before the accident. Investigators found that the mine operator listed Herrera as an independent haul truck driver and gave Herrera site-specific hazard awareness training at Bonito Pit. Investigators determined that Lara Truck was a contractor at Bonito Pit and Herrera should have received comprehensive training per 30 CFR Part 46.5(g).

Examinations

Randell Major, East of Gate Manager for Black Rock Services, examined the main haul road on the day of the accident and found no hazards. Based on interviews and a review of records, investigators learned that there were no records indicating pre-operational inspections of the haul truck or trailer. Lara stated that he and other drivers employed by Lara Truck conduct pre-operational inspections prior to the haul trucks leaving Lara Truck's off-site yard. Because Lara Truck had rented the trailer only two days before the accident, and because of the number and type of deficiencies found in the braking system after the accident, investigators determined that Lara Truck did not assure that drivers performed an adequate pre-operational inspection prior to placing the tractor and trailer into operation.

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 contractor did not maintain the trailer brakes in a functional condition.

Corrective Action: Lara Truck informed MSHA that the trailer involved in the accident will never be placed into service on mine property. Lara Truck is no longer a contractor or providing haulage services at mines. As an additional precaution, the mine operator developed written procedures to assure that contractors perform adequate pre-operational inspections on mobile equipment, including inspecting brakes. The mine operator will observe contractor truck drivers perform inspections of their haul trucks and brakes as soon as they enter the mine property.

2. Root Cause: The contractor did not assure that the contract truck driver performed an adequate pre-operational inspection on the haul truck to identify defects prior to placing equipment into operation.

Corrective Action: Lara Truck is no longer a contractor or providing haulage services at mines. As an additional precaution, the mine operator developed written procedures to assure that contractors perform adequate pre-operational inspections on mobile equipment. The mine operator will observe contractor truck drivers perform inspections of their haul trucks as soon as they enter the mine property. The mine operator will assure that contractor truck drivers have the skills necessary to perform tasks in a safe manner. All miners and contractors have been trained in these procedures.

CONCLUSION

On September 21, 2021, at 1:50 p.m., Gerardo Herrera, a 68 year-old contract truck driver with 20 years of experience, died while operating a haul truck. The contract truck driver was found lying in front of his haul truck near the edge of the haul road. The haul truck was upright and facing the opposite direction of the expected travel route.

The accident occurred because the contractor did not: 1) maintain the trailer brakes in a functional condition, and 2) assure that the contract truck driver performed an adequate pre-operational inspection on the haul truck to identify defects prior to placing equipment into operation.

Approved by:

William O'Dell
District Manager

Date

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Black Rock Services.

A fatal accident occurred on September 21, 2021, at 1:50 p.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 Lara Truck for a violation of 30 CFR 56.14101(a)(3).

A fatal accident occurred at this operation on September 21, 2021, when a miner was run over by the haul truck he was driving. The trailer braking system had mechanical deficiencies that adversely affected the brakes on the trailer. The miner lost control of the haul truck, exited the cab, and was run over by the haul truck, resulting in his death.

3. A 104(a) citation was issued to Lara Truck for a violation of 30 CFR 56.14100(a).

A fatal accident occurred at this operation on September 21, 2021, when a miner was run over by the haul truck he was driving. The independent contractor did not perform adequate pre-operational inspections on the tractor and trailer. The trailer braking system had mechanical deficiencies that adversely affected the brakes on the trailer. The miner lost control of the haul truck, exited the cab, and was run over by the haul truck, resulting in his death.

APPENDIX A – Persons Participating in the Investigation

Black Rock Services

Robert Caldwell	Owner
Kevin Riley	Safety Compliance Training Manager
Randell Major	East of Gate Manager
Thomas Maes	Water Truck Driver
Anthony Casias	Scale House Operator

Lara Truck

Marcos Lara	Owner
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Andre Trucking

Miguel Aguilar	Truck Driver
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Cintas Services

David Gamble	Truck Driver
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Daniel's Road Service

Cesar Miranda	Owner
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New Mexico State Police

Juan Cordova	State Police Officer
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Mine Safety and Health Administration

Ramiro Jimenez	Supervisory Mine Safety and Health Inspector
Erin Estrada	Mine Safety and Health Specialist

APPENDIX B – Aerial View of the Main Haul Road



APPENDIX C – Photograph of the Equipment Involved

