FAI-6889369-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Sand and Gravel)

Fatal Powered Haulage Accident
December 13, 2021

Liberty Ranch
Martin Marietta Materials Southwest, Inc.
Liberty, Liberty County, Texas
ID No. 41-05268

Accident Investigators

James Redwine
Mine Safety and Health Inspector

Thomas Balch
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Dallas District
1100 Commerce Street RM 462
Dallas, TX 75242
William O’Dell, District Manager

TABLE OF CONTENTS

OVERVIEW 1

GENERAL INFORMATION 1

DESCRIPTION OF THE ACCIDENT 2

INVESTIGATION OF THE ACCIDENT 2

DISCUSSION 3

Location of the Accident 3

Equipment Involved 3

Weather 3

Training and Experience 3

ROOT CAUSE ANALYSIS 4

CONCLUSION 4

ENFORCEMENT ACTIONS 5

APPENDIX A – Persons Participating in the Investigation 6

APPENDIX B – Photograph of the Accident Scene 7

APPENDIX C – Photograph of the Equipment Involved 8

APPENDIX D – Site-Specific Hazard Awareness Training Signs 9

OVERVIEW

On December 13, 2021, at approximately 10:42 a.m., Eduardo Jimenez-Gonzales, a 24 year-old customer truck driver with four years of experience, died while assisting another customer truck driver with a right turn signal light issue in the tarping area. Jimenez-Gonzales was standing between their trucks when his truck rolled forward, pinning him between the front of his truck and the trailer of the other truck.

The accident occurred because the mine operator did not: 1) provide adequate site-specific hazard awareness training and, 2) assure truck drivers followed the established parking procedures when parking on a grade.

GENERAL INFORMATION

Martin Marietta Materials Southwest, Inc. owns and operates the Liberty Ranch mine. This mine is a surface sand and gravel mine located in Liberty, Liberty County, Texas. The mine employs 12 miners and operates one 12-hour shift, five days per week. The mine extracts sand and gravel from the pit by dredge and pumps the sand and gravel to the plant. The processed sand and gravel is then loaded by front-end loaders into customer trucks.

The principal management official at Liberty Ranch at the time of the accident was:

James Walker	Plant Manager

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on October 27, 2021. The 2020 non-fatal days lost incident rate for Liberty Ranch was zero, compared to the national average of 0.86 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On December 13, 2021, at 7:27 a.m., Jimenez-Gonzales obtained his first load from the Liberty Ranch mine, unloaded at an offsite location, and returned to the mine for a second load around 10:30 a.m. After obtaining his second load, Jimenez-Gonzales went to the scales and discovered the truck was overloaded by 800 pounds. Jimenez-Gonzales then dumped the excess material in the pit. Jimenez-Gonzales got back in line for the scales behind another truck operated by Alejandro Valois, Customer Truck Driver. Jimenez-Gonzales noticed the right turn signal light was not working on Valois's truck. Valois was rolling his tarp out to cover his load when Jimenez-Gonzales exited his truck.

Based on interviews and surveillance video, investigators believe that Jimenez-Gonzales set the hand brake on the steering wheel column and did not set the parking brake when he got out of his truck to tell Valois about the right turn signal. Valois and Jimenez-Gonzales both looked at the blinker on the trailer and Valois returned to his cab to activate the blinker so Jimenez-Gonzales could verify that it was not working. Jimenez-Gonzales remained behind Valois's trailer when the hand brake on Jimenez-Gonzales's truck released, allowing the truck to roll forward pinning him.

Valois heard Jimenez-Gonzales yell and pulled his truck forward about 12 feet from the front of Jimenez-Gonzales's truck. This allowed Jimenez-Gonzales's truck to roll forward again. Valois then got out of his truck to investigate the yell. Valois noticed the two trucks were still touching and saw Jimenez-Gonzales under Jimenez-Gonzales's truck by the passenger side tires. Valois ran to the scale house to get help from Christopher Avila, Scale House Attendant, who called Walker. Avila then called 911. Joel Davila and Tommy Koen, Deputy Sheriffs for the Liberty County Sheriff Department; Cody Parrish, Justice of Peace for Harris County; Allegiance Emergency Medical Services; and the Liberty Volunteer Fire Department arrived at the mine at 11:40 a.m. Parrish pronounced Jimenez-Gonzales dead at 12:00 p.m.

INVESTIGATION OF THE ACCIDENT

On December 13, 2021, at 11:15 a.m., Paul Villarreal, Senior Safety Manager for Southern Aggregate Region, called the Department of Labor National Contact Center (DOLNCC) to report the accident. At 11:25 a.m., the DOLNCC contacted Jim Dobyns, Mine Safety and Health Specialist. Dobyns contacted Brett Barrick, Assistant District Manager, who called the mine and issued a 103(j) order to Walker. Barrick sent Thomas Balch, Mine Safety and Health Inspector, to the mine. Balch arrived at 4:45 p.m. and modified the 103(j) order to a 103(k) order under the provisions of Section 103(k) of the Mine Act to assure the safety of the miners and preservation of evidence. Barrick assigned James Redwine, Mine Safety and Health Inspector, as the lead accident investigator.

On December 14, 2021, at 9:45 a.m., Redwine and Balch arrived at the mine to continue the investigation. MSHA's accident investigation team conducted an examination of the accident scene, interviewed miners and mine management officials, 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 exit road approximately 300 feet from the scale house. The main exit area also serves as a tarping area for haul trucks. The tarping area is approximately 200 feet from the end of the scale house and is wide enough for trucks to pass (see Appendix B). The grade of the road where the accident occurred was approximately one to two percent. When investigators tested the brakes, the truck immediately rolled when the driver released the foot brake without the hand brake being set. There was no sign telling customer truck drivers to stay in their vehicles unless actively tarping, or to chock the wheels when parked in the tarping area. The mine operator did not assure truck drivers followed the established parking procedures when trucks parked on a grade.

Equipment Involved

The customer truck is a 1980 Peterbilt Model 359M19 tractor, equipped with a Ranco end dump trailer (see Appendix C). Examination of the truck (tractor and trailer) did not reveal mechanical deficiencies or defects that contributed to the accident. Investigators found the hand brake on the trailer, and the service brakes and parking brakes on the tractor, functioned when tested and did not contribute to the accident.

Based on interviews and the functional parking brake test, investigators determined that Jimenez-Gonzales set the hand brake prior to leaving the truck. Truck drivers use the hand brake to engage the trailer brakes to maintain control of the trailer. Truck drivers can also use the hand brake while dumping a load out of the trailer to allow the tractor to move backward or forward while the trailer is being raised or lowered. The hand brake clearly states on the handle "Not for parking." When the hand brake is set to a pressure of 35 pounds per square inch, it is designed to release on its own after approximately five seconds. Investigators determined that the trailer hand brake's auto-release and the truck's parking brake not being set contributed to the accident.

Weather

The weather at the time of the accident was 70 degrees Fahrenheit with clear skies. Investigators determined that weather did not a contribute to the accident.

Training and Experience

Jimenez-Gonzales had four years of experience driving the tractor trailer truck involved in the accident. Gonzales received site-specific hazard awareness training from the mine's two, four-foot by eight-foot posted signs at the front gate (see Appendix D). There were 27 items listed on the two signs, which would not be clear and understandable for incoming customer truck drivers to read as they enter the mine. One of the items stated, "All vehicles (including customer trucks) parked over a 1% grade must use the parking brake and be chocked or parked into a berm or dip, when the driver is out of the vehicle". Another item stated, "All vehicles must use parking brake when driver is out of the vehicle and parked at a less than 1% grade." The mine operator did not have signs in the tarping area where the accident occurred to warn of the one to two percent grade that is not immediately obvious to customer truck drivers. The mine operator did not provide adequate site-specific hazard awareness training for the hazard posed by the grade of the tarping area.

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 mine operator did not provide adequate site-specific hazard awareness training.

   Corrective Action: The mine operator installed signs in the tarping area that are understandable and instruct customer truck drivers to set their parking brake and chock their wheels when exiting their trucks. In addition, the mine operator has regraded the tarping area to a zero percent grade.

2. Root Cause: The mine operator did not assure truck drivers followed the established parking procedures when parking on a grade.

   Corrective Action: The mine operator is now requiring that parking brakes will be set and wheel chocks will be placed in front of the tires while in the tarping area. The mine operator provided chocks for customer truck drivers. Scale house personnel will monitor the customer truck drivers using the wheel chocks. The mine operator installed an additional sign instructing drivers to remain in their trucks until they are in the tarping process. In addition, the mine operator created two tarping lanes to prevent trucks from having to stop directly behind each other.

CONCLUSION

On December 13, 2021, at approximately 10:42 a.m., Eduardo Jimenez-Gonzales, a 24 year-old customer truck driver with four years of experience, died while assisting another customer truck driver with a right turn signal light issue in the tarping area. Jimenez-Gonzales was standing between their trucks when his truck rolled forward, pinning him between the front of his truck and the trailer of the other truck.

The accident occurred because the mine operator did not: 1) provide adequate site-specific hazard awareness training and, 2) assure the established parking procedures were followed when parking on a grade.

Approved By:

____________________________________ _______________

William O'Dell Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Martin Marietta Materials Southwest, Inc.

   An accident occurred on December 13, 2021, at approximately 10:42 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 Martin Marietta Materials Southwest, Inc. for a violation of 30 CFR 46.11.

   A fatal accident occurred at the mine on December 13, 2021, when a customer truck driver was pinned between his truck and another customer truck driver's truck. The tarping area where the accident occurred had a one to two percent grade that allowed the truck to roll forward if the parking brake was not set. Although signs were posted at the mine entrance, there were 27 items listed, which would be difficult for incoming customer truck drivers to read and comprehend as they enter the mine. There were no signs in the tarping area where the accident occurred to warn of the one to two percent grade that is not immediately obvious to customer truck drivers. The mine operator did not provide adequate site-specific hazard awareness training for the hazard posed by the grade of the tarping area.

3. A 104(a) citation was issued to Martin Marietta Materials Southwest, Inc. for a violation of 30 CFR 56.14207.

   A fatal accident occurred at the mine on December 13, 2021, when a customer truck driver was pinned between his truck and another customer truck driver's truck. The tarping area where the accident occurred had a one to two percent grade that allowed the truck to roll forward if the parking brake was not set. The mine operator did not assure truck drivers followed the established parking procedures to set the parking brake and chock the wheels when parked on a grade.

APPENDIX A – Persons Participating in the Investigation

Martin Marietta Materials Southwest, Inc.

Name	Title
Paul Villarreal	Senior Safety Manager for Southern Aggregate Region
Ash Kotwal	Houston District Production Manager
Howard Smith	Senior Safety Representative of Houston District
Karen Johnston	Attorney
Malcolm Cox	Assistance General Counsel
James Walker	Plant Manager
Christopher Avila	Scale House Attendant

Independent Truck Drivers

Name	Title
Martin Jimenez	Customer Truck Driver
Leo Jimenez	Customer Truck Driver
Luis Romo	Customer Truck Driver

Mike Elledge Trucking

Name	Title
Alejandro Valois	Customer Truck Driver

Liberty County Sheriff Department

Name	Title
Joel Davila	Deputy Sheriff
Tommy Koen	Deputy Sheriff

Mine Safety and Health Administration

Name	Title
Thomas Balch	Mine Safety and Health Inspector
James Redwine	Mine Safety and Health Inspector

APPENDIX B – Photograph of the Accident Scene

APPENDIX C – Photograph of the Equipment Involved

APPENDIX D – Site-Specific Hazard Awareness Training Signs