FAI-6825681-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Facility
(Cement)

Fatal Fall of Person Accident
January 23, 2020

Tehachapi Plant
Lehigh Southwest Cement
Tehachapi, Kern County, California
Mine ID No. 04-00196

Investigators

Bart T. Wrobel
Supervisory Mine Safety and Health Inspector

Eric Weidman
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Western District
991 Nut Tree Road, Second Floor
Vacaville, California 95687
James M. Peck, District Manager

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OVERVIEW

Timothy A. Fortier, a 71-year-old Truck Driver, employed by a contractor, with over 48 years of total mining experience, fell from the top of his bulk trailer on January 23, 2020, while opening the bulk trailer lids. Fortier died on January 26, 2020, due to head trauma he received from the fall.

The accident occurred because mine management did not have adequate policies, procedures, and equipment in place for truck drivers to accurately position and connect the truck rack cages/gangway ramps to the top of the trailers attached to the trucks.

GENERAL INFORMATION

Lehigh Southwest Cement owns and operates the Tehachapi Plant, a cement plant located in Tehachapi, Kern County, California. Lehigh Southwest Cement employs 112 miners at the Tehachapi Plant and operates two 12-hour shifts, seven days a week. Tehachapi Plant mines limestone from multiple benches in an open pit and transports the limestone in haul trucks to a primary crusher. Conveyors move the limestone along with other materials to the plant to produce cement.

The principal officers for this facility at the time of the accident were:

Chris Ward.....President
Rick Parker ..... VP Cement Operations

The mine operator had contracted Griffin Soil Group, Fortier's employer, to haul powdered cement from the plant.

The Mine Safety and Health Administration (MSHA) completed the last regular inspection on December 23, 2019. The non-fatal days lost (NFDL) incident rate for the Tehachapi Plant for 2019 was 0 compared to the national average of 2.66.

DESCRIPTION OF THE ACCIDENT

On January 23, 2020, Timothy A. Fortier started work at 5:04 a.m. driving his tractor-trailer, which comprised two bulk trailers (see Appendix A: Figure 1), to deliver a load of fly ash to South Valley Materials located in Hanford, California. After making the delivery, he drove to the Tehachapi Plant and arrived at 1:17 p.m. Fortier positioned his tractor-trailer on the south side of Tehachapi Plant's east truck racks. The truck drivers entering the Tehachapi Plant use the east truck racks to access and open the lids on top of the bulk trailers and then travel to cement silos for loading. After the bulk trailers are loaded with cement, the drivers move the vehicles to the south side truck racks to access and close the bulk trailer lids.

MSHA investigators determined through photographs and interviews with mine management, miners and customer truck drivers that when Fortier pulled into the east truck racks, he parked his truck so the rear bulk trailer's right front fender was within one foot of the truck rack (see Appendix A: Figure 2).

Fortier's tractor-trailer had a video camera mounted on the dash. The dash camera video shows Fortier walking in front of the tractor-trailer toward the racks at 1:21 p.m. The video cameras mounted under the truck racks show that Fortier talked briefly with Tony Count, Truck Driver with Griffin Soil Group, at 1:22 p.m. Count had parked his vehicle at the north side of Tehachapi Plant's east truck racks to open the lids on his vehicle for loading. Count and Mark Madsen, Driver Trainee with Griffin Soil Group, pulled away from the area in their vehicle at 1:23 p.m.

Shadows appear in the right side mirror in the dash camera video recorded right before the accident, indicating movement on top of the bulk trailer immediately behind the tractor. On this footage, repeated calls for help were recorded at 1:33 p.m., followed by the sound of impact with the ground.

At 1:40 p.m., Count pulled his loaded truck beneath the west truck rack, approximately 100 yards from and facing Fortier's truck. Count stated that he saw Fortier on the ground and ran toward his truck. The dash camera video shows Count looking toward Fortier's truck and running toward the victim. The dash camera video then shows Madsen running toward the truck and Count running to get help, while Madsen stayed with the victim. Andrew Llere, Control Room Operator, called 911 and paramedics arrived at the scene at 1:54 p.m. and stabilized the victim. The ambulance transported Fortier to the hospital where he succumbed to head trauma injuries on January 26, 2020.

INVESTIGATION OF THE ACCIDENT

On January 23, 2020, at 2:09 p.m., Rob Shugart, Safety Manager of Lehigh Southwest Cement, called the Department of Labor National Contact Center (DOLNCC). The DOLNCC contacted Randy Cardwell, Supervisory Mine Safety and Health Inspector. Cardwell notified Miles Frandsen, Supervisory Mine Safety and Health Inspector. Frandsen dispatched Eric Wiedeman, Mine Safety and Health Inspector, to the mine, and he arrived at 5:30 p.m. Wiedeman conducted the initial accident investigation. The preliminary information provided to MSHA from mine management was that Mr. Fortier had suffered a stroke. MSHA learned of the cause of death during the review of the autopsy report on February 5, 2020. Bart Wrobel, Supervisory Mine Safety and Health Inspector, went to the mine site at 12:30 p.m. on February 10, 2020, to start a fatal accident investigation after learning that the victim died of head trauma.

MSHA's accident investigation team conducted a physical inspection of the accident site, interviewed mine management, miners and customer truck drivers and reviewed conditions and work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management, the contract trucking company management, and miners. See Appendix B for a list of persons participating in the investigation.

DISCUSSION

Location of the Accident

The accident occurred at the south entrance of Tehachapi Plant's east-side truck racks (see Appendix C).

Weather

At the time of the accident, the weather was partly cloudy, with a temperature of 56 degrees Fahrenheit. Weather did not contribute to the accident.

Equipment Involved

The company installed Carbis model CI-TCG 2000 gangway ramps with Safe-T Cages (see Appendix D) to provide access to the top of bulk trailers. Truck drivers park their bulk trailers underneath a truck rack. Truck drivers then exit the truck, climb stairs to a platform, and lower a gangway ramp with an attached Safe-T Cage. A properly aligned Safe-T Cage sits on top of the bulk trailer around the lid, providing a secure work platform for the driver to access the lid. From this position, truck drivers open the lids so bulk trailers can be loaded. Also from this position, drivers close the lids after the bulk trailer is loaded. For proper alignment of the Safe-T Cage over the lid, a tractor-trailer must be approximately three feet away from the racks.

The victim's tractor was a model 2018 Mack. At the time of the accident, there were two J & L bulk trailers in tow. The bulk trailer immediately behind the tractor was a single axle semi-trailer with an unloaded weight of 4,920 pounds. The rear bulk trailer was a double axle full trailer with an unloaded weight of 6,500 pounds. Both trailers were model year 1999. The inspector examined the tractor-trailer and noted that two of the lid latches had been unscrewed

and there were scuffmarks on the driver's side of the front bulk trailer coming down from the lid. There were no apparent mechanical issues found on the tractor-trailer.

Tractor-trailer Alignment

Based on photos, and substantiated by interviews with other drivers, the victim's tractor-trailer was too close to the truck rack frame for the gangway ramp and Safe-T Cage to properly align with the lid. The Safe-T Cage hit the passenger side of the bulk trailer and did not effectively seal the lid area on top of the bulk trailer, creating an approximate two to two-and-a-half-foot gap between the Safe T Cage railing and the bulk trailer, through which a person could fall. The victim fell approximately 12 feet from the top of the bulk trailer to the concrete pad below. The company did not institute adequate policies, procedures, or equipment to assure proper alignment of trucks when using the Safe-T Cages to open or close the lids. The only instruction was a manufacturer's instruction placard posted at the stairs to the truck rack (see Appendix E).

The mine operator modified the scene of the accident before Mr. Wiedeman arrived on site by moving the gangway ramp and the tractor-trailer away from the truck racks. MSHA learned through interviews that a miner observed that the Safe-T Cage was misaligned against the passenger side of the front bulk trailer, prior to the time the ramp and tractor-trailer were moved.

Chargeability Review Committee

When a miner's death is not conclusively determined to be chargeable to the mine operator, MSHA submits the facts of the case, including background and supporting information, to the MSHA Chargeability Review Committee (Committee) for a decision. The Committee examined whether Fortier's past medical history could have caused his death. Based on the death certificate, medical evidence, and MSHA's investigation, the Committee concluded that Mr. Fortier's death is chargeable to the mine operator because his death was due to mine-related work activities.

Training and Experience

Fortier operated over-the-road trucks for more than fifty years, and had been picking up material at the Tehachapi plant for over five years. He received Site Specific Hazard Awareness Training from the mine operator on July 15, 2019. The training he received met the requirements of 30 CFR Part 46.

ROOT CAUSE ANALYSIS

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

Root Cause: Management did not provide adequate policies, procedures, or equipment to assure proper alignment of the bulk trailers in relation to the truck racks such that the gangway ramp with Safe-T Cage would properly protect miners while they opened the bulk trailer lids.

Corrective Action: Management installed bumpers to help align the trucks as they entered the truck ramps. Management has developed and provided training to drivers on their new policies and procedures for proper alignment of bulk trailers with the gangway ramp and Safe-T Cage.

CONCLUSION

Timothy A. Fortier, a 71-year-old Truck Driver, employed by a contractor, with over 48 years of total mining experience, fell from the top of his bulk trailer on January 23, 2020, while opening the bulk trailer lids. Fortier died on January 26, 2020, due to head trauma he received from the fall.

The accident occurred because mine management did not have adequate policies, procedures, and equipment in place for truck drivers to accurately position and connect the truck rack cages/gangway ramps to the top of the trailers attached to the trucks.

Approved By: _____ Date: _____
James M. Peck,
District Manager

ENFORCEMENT ACTION

Citation No. 8694566 was issued to Lehigh Southwest Cement under the provisions of Section 104(a) of the Mine Act, for a violation of the 30 CFR 56.11001:

A fatal accident occurred at this operation on January 23, 2020, when safe means of access was not being provided and/or maintained to align the gangway ramp Safe-T Cage for accessing the lids on top of the bulk trailers. A miner suffered a fatal injury when he fell approximately twelve (12) feet from the top of the bulk trailer through a gap resulting from misalignment of the tractor-trailer with the truck rack.

The gap was the result of the tractor-trailer not being correctly aligned with the center of the truck racks. The bulk trailer's location was noted from the under truck rack cameras view that shows the bulk trailer was approximately three (3) feet off center. With the bulk trailer three (3) feet too close to the racks, a gap between the gangway ramp with Safe-T Cage and the driver's side top surface of the bulk trailer is created where miners can fall through. While there is an operating diagram located at the steps leading up to the top of the truck racks, which describes how to align the bulk trailer with the gangway ramp with Safe-T Cage, there is no means for drivers to correctly align their units with the Safe-T Cage as they pull their units under the truck rack.

APPENDIX A
Photographs

Figure 1: Bulk Trailer and Truck involved in accident

Figure 2: Victim's truck (right side) location at the time of the accident

APPENDIX B
Persons Participating in the Investigation

Lehigh Southwest Cement

Megan Neal.....Lehigh / Hanson Area Safety
Robert Shugart .....Safety Manager
Andy Rigler .....Director of Health & Safety West Region
Maria Cincis..... HR Generalist
Mike Rohmaller .....Kiln Engineer
Hiram Escabi Jr..... .Shipping Supervisor
Mike Ledesma.....Miners Representative
Ray Tomasko .....Miners Representative
Austin Zehr .....Truck Weighmaster
Moe Golden .....Labor Supervisor

Griffin Soil Group

Marvin Hernandez Garcia .....Safety Director
Tony Count .....Truck Driver
Mark Madsen ..... Driver Trainee

Mine Safety and Health Administration

Eric Weidman ..... Mine Safety & Health Inspector
Bart Wrobel ..... Supervisory Mine Safety & Health Inspector

APPENDIX C
East-side truck racks with Carbis Gangway Ramps and Safe-T Cages

APPENDIX D
Proper Alignment of Safe-T Cage
(East Truck Racks)

APPENDIX E
Instruction chart on how to use the truck racks