FAI-6936105-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Industrial Sand N.E.C.)

Fatal Slip or Fall of Person Accident
August 5, 2023

Superior Silica Sands San Antonio Plant
Superior Silica Sands LLC
San Antonio, Bexar County, Texas
ID No. 41-01126

Accident Investigators

Dwight Shields
Supervisory Mine Safety and Health Inspector

Homer Pricer
Supervisory Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Dallas District
1100 Commerce Street, Room 462
Dallas, Texas 75242
William O'Dell, District Manager

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OVERVIEW

On August 5, 2023, at approximately 8:15 p.m., Mario Jose Meza Garcia, a 44 year-old customer truck driver with several years of truck driving experience, was fatally injured when he fell while descending from a SandBox container (SandBox) mounted on his truck's trailer after opening the SandBox's lid. Garcia died from his injuries on August 7, 2023.

The accident occurred because the mine operator did not provide site-specific hazard awareness training to the customer truck driver.

GENERAL INFORMATION

Superior Silica Sands LLC owns and operates Superior Silica Sands San Antonio Plant. This is a surface industrial sand mine located in San Antonio, Bexar County, Texas. The mine employs 122 miners and operates two 12-hour shifts, seven days per week. Front-end loaders and excavators load the sand into haul trucks which transport it to the plant. The plant washes, dries, and screens the sand into the various sizes. Belt conveyors transport the sand to other stockpiles or silos at the mine. The mine sells the sand for use in the petroleum fracking and construction industries.

The principal management officials at Superior Silica Sands San Antonio Plant at the time of the accident were:

Robert Watson	Safety and Health Manager
Justin Cedillo	Logistics Leadman

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on June 26, 2023. The 2022 non-fatal days lost incident rate for Superior Silica Sands San Antonio Plant was zero, compared to the national average of 0.96 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On August 5, 2023, at 8:05 p.m., Garcia arrived at the inbound customer truck kiosk to check-in so he could receive a load of sand. The check-in kiosk is an automated kiosk that is not staffed by anyone. Garcia was driving a tractor trailer with a SandBox on the trailer, which is a manufactured metal container used for hauling sand.

The mine operator has a surveillance camera that records activity at the check-in kiosk. According to the surveillance video, Garcia checked-in at the kiosk, pulled his truck forward, stopped his truck, exited the cab of the truck, walked to the trailer, and climbed up the front of the SandBox without the use of a ladder or fall protection equipment. Garcia opened the lid on top of the SandBox, approximately nine feet and three inches above the trailer, and began climbing back down the front of the SandBox. Garcia fell approximately five feet and two inches, striking his head on the exposed steel trailer frame, and then fell an additional two feet to the ground.

According to interviews, Oscar Castañeda and Carlos Reys, Customer Truck Drivers, overheard conversations on the Citizen Band (CB) radio that a driver had fallen. Castañeda and Reys called the logistics building/scale house on the CB radio, and informed Justin Cedillo, Logistics Leadman, Jonathan Marroquin and Jose Pacheco, Scale House Attendants, that a driver had fallen. Cedillo, Marroquin, and Pacheco traveled to the accident site. At 8:16 p.m., Marroquin called 911 and Pacheco helped Garcia stay upright while leaning against the truck. At 8:25 p.m., Acadian Ambulance Service (AAS) arrived at the mine site and transported Garcia to Brooke Army Medical Center. On August 7, 2023, Garcia succumbed to the injuries received during the fall and was pronounced dead by Ashly Ruf, MD, at 4:16 p.m.

INVESTIGATION OF THE ACCIDENT

On August 8, 2023, at 4:42 p.m., Watson called the Department of Labor National Contact Center (DOLNCC) to report the accident. The DOLNCC contacted Steven Oates, Staff Assistant. Oates notified Brett Barrick, Assistant District Manager, and Homer Pricer, Supervisory Mine Safety and Health Inspector, of the accident. Barrick assigned Dwight Shields, Supervisory Mine Safety and Health Inspector, as the lead accident investigator.

At 7:30 p.m., Pricer 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. Pricer also secured the area and gathered preliminary information. On August 9, 2023, at 3:10 p.m., Shields arrived at the mine and continued the investigation. MSHA's accident investigation team conducted an examination of the accident scene; interviewed miners, mine management, customer truck drivers and other relevant personnel; reviewed surveillance video; 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 at the inbound customer truck check in-kiosk (see Appendix B).

Weather

The weather at the time of the accident was fair, 98 degrees Fahrenheit, with calm air. The investigators determined that weather did not contribute to the accident.

Equipment Involved

The SandBox involved in the accident was mounted on a Pratt trailer chassis, Model DDL 382 AL-R001, which was being towed by a 2018 Navistar Tractor, Model LT 625 (see Appendix C).

The SandBox can transport approximately 40,000 pounds of sand per load and is loaded through a lid-covered opening located on top of the box. The SandBox was nine feet, three inches tall and the trailer it mounts onto was two feet, three inches above ground level. The SandBox had an aluminum ladder that was in a stowed position on the trailer frame behind the SandBox. The ladder had six attachment points that aligned with six receptacles on the sides of the SandBox and was designed for use to access the top of the SandBox. There were six receptacles on each of the four sides of the SandBox. Investigators found no safety defects when they removed the ladder from its stowed position and set up the ladder on each side of the SandBox.

The SandBox had two vertical support channels and three horizontal support channels located on each side of the SandBox. According to the mine operator's surveillance video, Garcia used the horizontal channels and the ladder receptacles to aid in climbing up the side of the SandBox while wearing slide-on shoes. Investigators did not identify any safety defects to the truck or the SandBox that contributed to the accident.

The mine operator utilizes a Safe Rack fall protection system when accessing customer trucks. The Safe Rack system is comprised of two large steel structures, one for inbound truck traffic and the other for outbound truck traffic, with elevated catwalks and handrails, designed to allow mine employees to access the customer's trailers safely while the customer truck drivers wait inside the cab. The inbound Safe Rack system is located approximately 500 feet away from the check-in kiosk. According to interviews, the proper procedure for loading the customer trucks at this mine is customer trucks pull up to the inbound Safe Rack system where mine employees open the customer's trailer hatches or lids. The customer truck driver then proceeds to silos where an automated system loads the customer trailer with sand. After being loaded, customer truck continues to the outbound Safe Rack system. At the outbound Safe Rack system, mine employees close the hatches or lids while the truck driver waits inside the cab. Then, the customer truck driver leaves mine property.

Customer Truck Loading Procedure

Investigators determined that when a customer truck leaves the inbound customer truck check-in kiosk, the scale house attendant calls them forward to a stop sign and holds them there to prevent congestion at the inbound Safe Rack system location (see Appendix D). Once congestion has cleared, the scale house attendant instructs the customer truck driver to proceed to the inbound Safe Rack system location which is staffed by mine employees for the purposes of opening the lids on the cargo trailers.

Training and Experience

According to Garcia's brother, Garcia had several years of truck driving experience in Central and South America prior to coming to the United States. Eric Maldonado, Contractor of Drivers for Empire Transportation LLC (Empire), stated that Garcia was employed by Empire for approximately three weeks. Based on scale house records, on the day of the accident, Garcia received one load at 5:11 a.m., prior to the accident. Garcia had been to the mine three times in the previous week for loads.

The mine operator's site-specific hazard awareness training procedure for customer truck drivers, which is also translated into Spanish, included:

1) Stopping at the kiosk approximately 10 to 12 feet before entering the plant site to check-in and notify the scale house prior to weighing.
2) The scale house attendant confirms the driver's assigned number from previous site-specific hazard awareness training by the serial number from a sticker on their hard hat. If the driver does not have a number or is unable to provide one, they are directed to proceed to the scale house to receive training. Investigators determined that no one on the day of the accident confirmed the victim's hazard awareness training.
3) Once the driver receives site-specific hazard awareness training, the mine operator issues the driver a hard hat sticker with a serial number, and the serial number and driver's name are recorded.

The serial number on the hard hat located in Garcia's truck was not assigned to Garcia. Investigators were unable to determine how Garcia came into possession of the hard hat. The mine operator was not able to produce any evidence that Garcia received site-specific hazard awareness training.

The site-specific hazard awareness training instructed drivers to stay in their trucks until they were at the scale house or the Safe Rack system. The training also stated, "drivers are not allowed on top of their truck or trailer without the use of the Safe Rack system and PPE is always required when out of the vehicle. Through video surveillance, other customer truck drivers were observed outside of the trucks in non-compliance with the operator's site-specific training. Drivers must wear a hard hat, safety glasses, and steel toe boots." The site-specific hazard training was provided in English and Spanish. Garcia accessed the top of the SandBox without the Safe Rack system and was not wearing steel toe boots.

In addition to the training provided at the scale house, the mine operator had site-specific hazard awareness training signage in English and Spanish along the roadway from the mine entrance to

the inbound customer truck check in kiosk. However, the signs had small letters, were low to the ground, and in some instances obstructed by vegetation (see Appendix E). The investigators determined that the mine operator did not provide Garcia with site-specific hazard awareness training, which contributed to the accident.

ROOT CAUSE ANALYSIS

The accident investigation team conducted an analysis to identify the underlying causes of the accident. The investigators 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 site-specific hazard awareness training to the customer truck driver.

   Corrective Action: The mine operator has taken several steps to ensure the safety of all employees, visitors, sub-contractors, and customer truck drivers. The operator has installed larger hazard awareness signs in both English and Spanish to indicate the rules and hazards for the mine. Additionally, the operator has developed a standard operating procedure on how the hazard awareness training is given to all employees, visitors, sub-contractors, and customer truck drivers. This procedure includes an audit of the customer truck drivers on their knowledge of the hazard awareness training.

CONCLUSION

On August 5, 2023, at approximately 8:15 p.m., Mario Jose Meza Garcia, a 44 year-old customer truck driver with several years of truck driving experience, was fatally injured when he fell while descending from a SandBox container mounted on his truck's trailer after opening the SandBox's lid. Garcia died from his injuries on August 7, 2023.

The accident occurred because the mine operator did not provide site-specific hazard awareness training to the customer truck driver.

Approved by:

_____ _____

William O'Dell Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Superior Silica Sands LLC.

   A fatal accident occurred on August 5, 2023, at approximately 8:15 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. 104(a) citation was issued to Superior Silica Sands LLC for a violation of 30 CFR 46.11(d).

   A fatal accident occurred at this operation on August 5, 2023, when a customer truck driver fell while descending the front of a large container mounted on the trailer without the use of a safe means of access provided or fall protection. The mine operator did not assure the driver had received Site-Specific Hazard Awareness Training that specifically addressed restricted areas, safe access for truck drivers, and other site hazards and controls.

APPENDIX A – Persons Participating in the Investigation

Superior Silica Sands San Antonio Plant

Nicholas Gradoury	Plant Manager
Robert Watson	Safety and Health Manager
Eliseo Perez	Logistics Manager
Justin Cedillo	Logistics Leadman
Jonathan Marroquin	Scale House Attendant
Jose Pacheco	Scale House Attendant

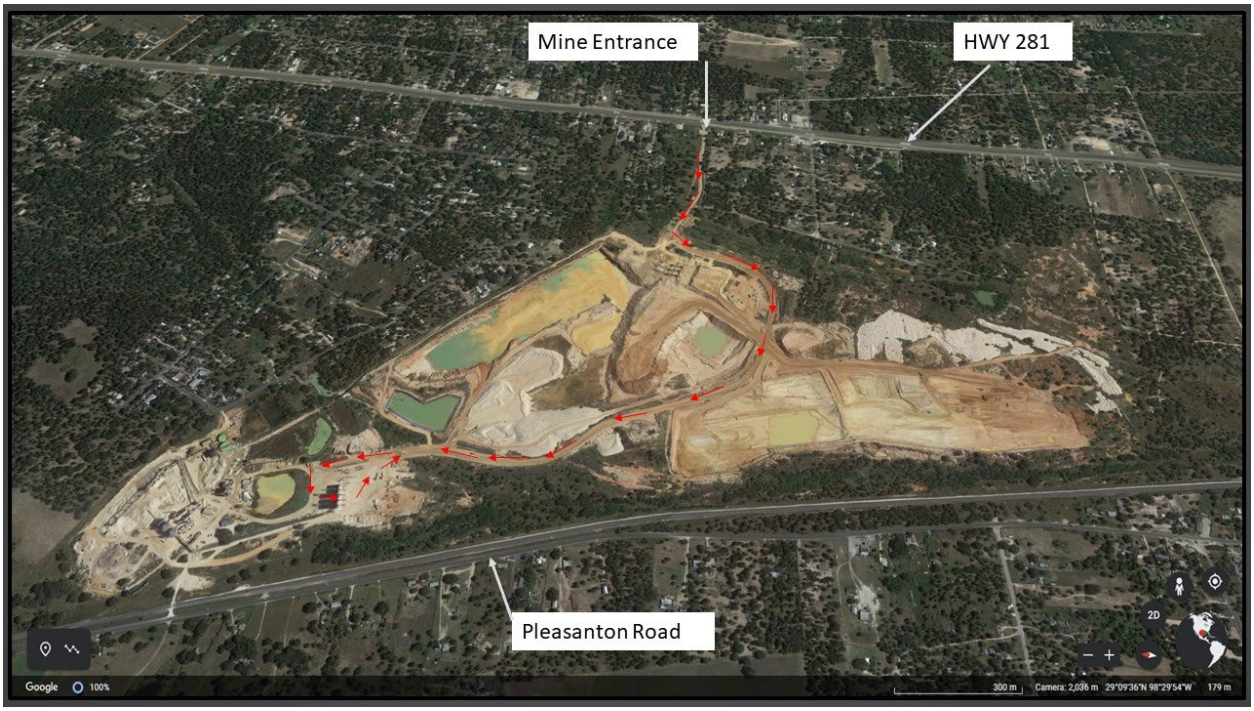
Empire Transport Services LLC

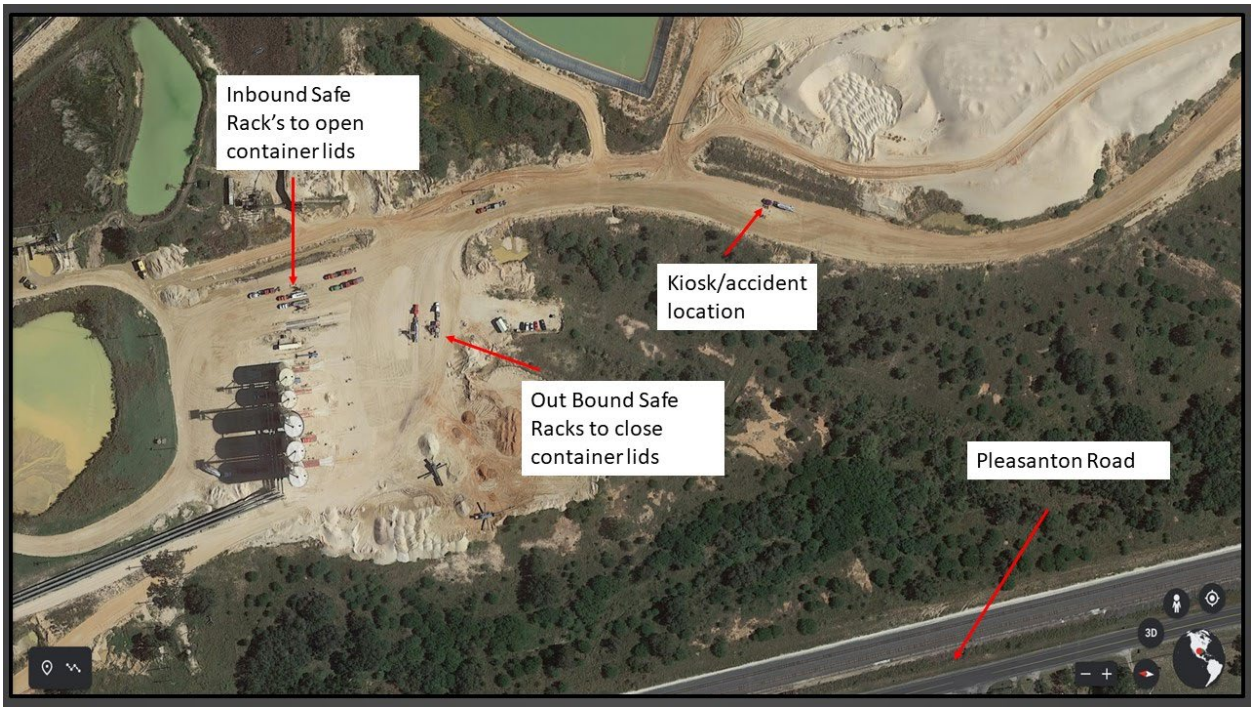
Eric Maldonado	Contractor of Drivers
Oscar Castañeda	Customer Truck Driver
Carlos Reys	Customer Truck Driver

Mine Safety and Health Administration

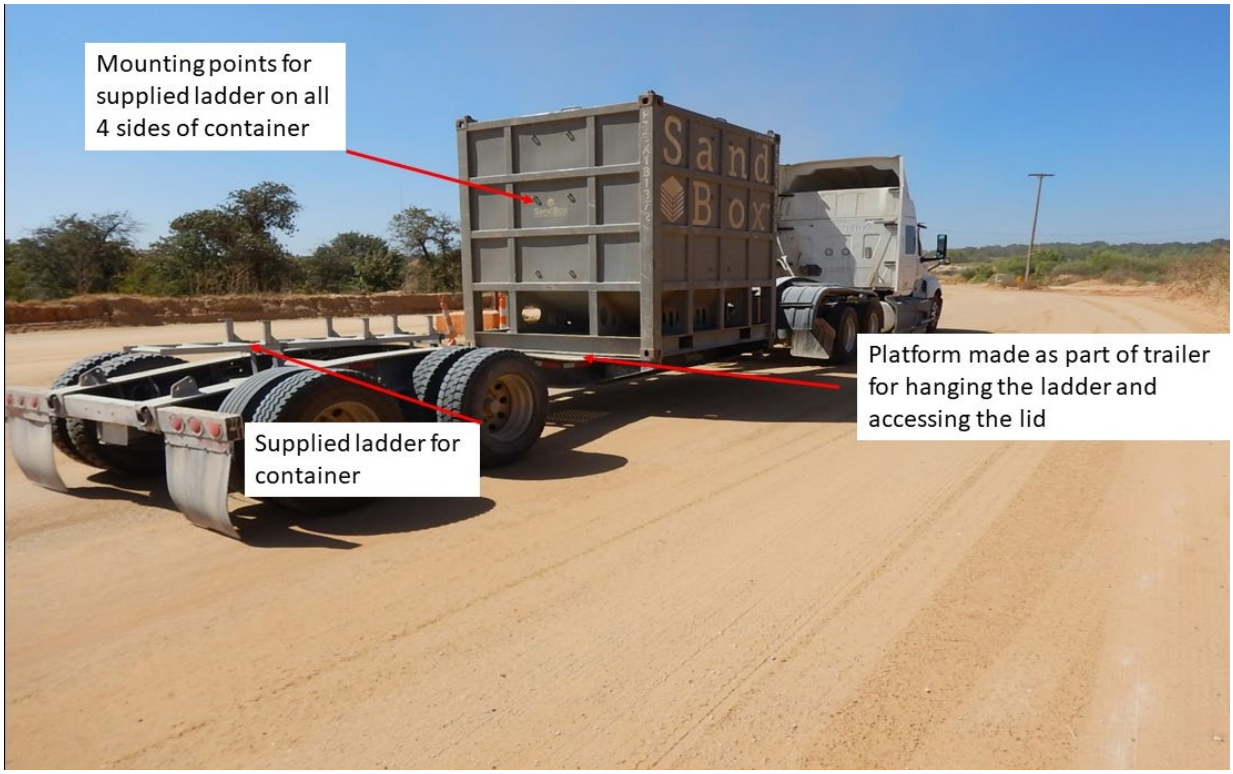
Dwight Shields	Supervisory Mine Safety and Health Inspector
Homer Pricer	Supervisory Mine Safety and Health Inspector

APPENDIX B – Aerial View of Mine and Accident Location





APPENDIX C – Truck and SandBox



APPENDIX D – Photo of Outbound Safe Rack System

APPENDIX E – Sign at the Kiosk