

**UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION
METAL AND NONMETAL MINE SAFETY AND HEALTH**

REPORT OF INVESTIGATION

Surface Nonmetal Mine

(Sand and Gravel)

Fatal Powered Haulage Accident

June 13, 2018

**King Sand and Gravel Mine
King Ready Mix Concrete, Inc.
Kerens, Navarro County, Texas
ID No. 41-04622**

Accident Investigators

**David B. Hamm
District Safety Specialist**

**Tommy Fitzgerald
Mine Safety and Health Inspector**

Originating Office

Mine Safety and Health Administration

South Central District

1100 Commerce Street

Dallas, Texas 75242

Michael A. Davis, District Manager

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OVERVIEW

On June 13, 2018, Aurelio Perez Sr., a 65-year old truck driver with 4 years of experience, drowned when the articulating haul truck he was driving left the roadway, traveled through a berm, and into a water impoundment.

GENERAL INFORMATION

King Ready Mix Concrete Inc. owns and operates King Sand and Gravel mine (King), an open pit strip mine located in Navarro County, Texas. The mine operates five days per week with one, ten-hour shift per day. The mine operator employs 17 miners.

King uses excavators to strip overburden and removed the sand and gravel. The material is loaded into haul trucks and transported 1.5 miles to a screen and wash plant where it is sized and sold to the general public and contractors. Mike Rachel, Plant Manager, is the principal officer of the mine.

The Mine Safety and Health Administration (MSHA) completed its last regular inspection of February 13, 2018.

DESCRIPTION OF ACCIDENT

On June 13, 2018, Aurelio Perez Sr. arrived at the mine site at approximately 7:00 a.m. and conducted a pre-operational inspection on the Volvo A40D, articulating haul truck assigned to him. Perez completed his checks and drove to the pit without talking to any of the haul truck drivers.

One of the other truck drivers stated Perez's truck nearly ran into his truck around 8:15 a.m. He stated it appeared Perez was not paying attention and he did not report the incident to management.

Another truck driver stated around 8:50 a.m., Perez's truck, which was empty, did not give his loaded truck the right of way, which is common practice on a narrow part of the road but did not think too much about it at the time.

Another truck driver said he was heading for the pit around 10:00 a.m. when he saw tire tracks on the berm and some spilled material that had not been there earlier in the shift. The truck driver did not stop to investigate and continued to the pit to get loaded. On his return trip to the wash plant, he encountered another driver on the road where the spilled material and tracks were on the berm. They both stated the spilled material and tracks were new but they did not observe anything abnormal in the water. Both drivers decided to see if they could find Perez somewhere on the mine property. One of the drivers went to the pit to get loaded and looked around the pit area for Perez. The other driver drove to the plant and dumped his load. After dumping his load, the driver looked around the yard, shop and ready line for Perez. At 11:40 a.m., he stopped at the mine office and reported to Sara King, Dispatcher, he could not find Perez.

King immediately notified Rachel of the concern and Rachel along with Martin Perez, Lead Person (the victim's son), went to the location on the haul road where Bass and Sowers found the spilled material. Rachel and Martin Perez concluded the truck must have traveled over the berm and entered the impoundment.

INVESTIGATION OF ACCIDENT

Mike Rachel, Plant Manager, called the MSHA Dallas District office at 12:00 p.m. stating a miner was missing and possibly submerged in a water impoundment. At 12:02 p.m. Rachel called 911 dispatch to report the accident. At 12:16 p.m., Tommy Fitzgerald, Mine Safety and Health Inspector, was dispatched to the scene to collect information and witness statements. David Hamm, Dallas District Safety Specialist was assigned lead investigator and dispatched to the scene.

Rachel later called the Department of Labor National Contact Center at 1:17 p.m. Fitzgerald arrived at the mine at 3:05 p.m. and discovered a very large group of first responders, police and on lookers at the scene. Divers had entered the water and located Perez unrestrained inside of the haul truck cab. Once Inspector Fitzgerald established they had located the missing miner, he issued a 103(k) order to the mine operator under the provisions of the Mine Act to ensure the safety of miners, preserve the scene and to begin the investigation.

On August 15, 2018, an MSHA Technical Support Mechanical Engineer examined the truck after the operator removed it from the impoundment. Technical Support, with assistance from VOLVO Product Assurance Engineering and ROMCO Equipment Company, determined the haul truck had been operating properly. The examiners discovered several mechanical defects such as: the audible low air pressure alarm had been disabled; the accumulators for both front and rear service brake circuits failed the accumulator test specified by Volvo's service manual; and both the front and rear service, brake circuits had hydraulic components that were leaking which allowed both accumulators circuits to lose hydraulic pressure without cycling the brakes. However, none of these defects would have contributed to the accident.

DISCUSSION

The haul road from the pit to the plant is approximately one and a half miles long, with several curves in the road. The haul road has posted "control speeds to road conditions" signs, but there were no posted speed limits. The haul truck drivers interviewed stated twenty to twenty five miles per hour was a safe operating speed based on roadway conditions on the day of the accident. Sowers stated he had observed Perez driving over thirty miles per hour in the past. The haul road is well maintained with no obstacles. The operator provided and maintained mid axle high berms along the haul road next to a 9.5 acre water pond. The haul road parallels the impoundment for about half of a mile. Where the truck entered the impoundment, the road narrowed from 40 feet to 35 feet and made a 30 degree turn with no obstructions restricting any views in the curve.

Weather Conditions

Weather condition were hot and dry. There were no visibility restrictions and no rain on the day of the accident.

Equipment involved in the accident

The vehicle involved in the accident was a 2006 Volvo A40D haul truck. In early April 2018, the mine operator reported the brakes locked up on the rear axle to ROMCO Equipment Company to evaluate the problem. The brake and rear axle inspection did not indicate any deficiencies. The truck was put back in service on June 7, 2018, with all systems working properly.

Training and experience

All haul truck drivers, including the victim, were properly trained and had received their annual refresher on February 10, 2018. Perez received New Miner Training on February 10, 2015, and he was task trained to drive the Volvo A40D haul truck on July 20, 2015.

CONCLUSION

Aurelio Perez Sr. drowned when the haul truck he was operating left the road and traveled over a berm and entered a water impoundment. There were no eye witnesses to the accident and, based on the investigation, investigators were unable to determine why the driver was unable to maintain control of the haul truck.

ENFORCEMENT ACTIONS

Order No. 9403461 was issued on June 13, 2018, under the provisions of Section 103(k) of The Mine Act:

On June 13, 2018 a 103(K) order 9403461, was issued in accordance with the 1977 Mine Act to assure the safety of all persons at this operation and to prevent and destruction of any evidence which would assist in investigating the cause or causes of the accident.

Approved: _____ Date _____

Michael A. Davis
South Central District Manager

Appendix A

Persons participating in the investigation

(Persons interviewed are indicated by a * next to their names)

King Sand and Gravel

Narcisso Lopez*	Loader Operator
Sara King*	Sales/Dispatch
Olvera Perez*	Excavator Operator
Louis Delatorre*	Mechanic
Mike Rachael*	Plant Manager
Martin Perez*	Lead Man

Participating in the investigation

John C. Bartz	Director, Product Assurance & Regulation Volvo Construction Equipment
Jerilyn Freeman	Director of Compliance & Risk Management, ROMCO Inc.
Jason Garrison	Service Technician, ROMCO Inc.
Thomas D. Bundorf	Senior Technologist, Caulfield Engineering L.L.C.

Mine Safety and Health Administration

David B. Hamm	Dallas District Safety Specialist
Tommy Fitzgerald	Mine Safety and Health Inspector
Fred T. Marshal	Mechanical Engineer, Technical Support

Appendix B VICTIM INFORMATION

Accident Investigation Data - Victim Information

U.S. Department of Labor
Mine Safety and Health Administration



Event Number:

Victim Information:

1. Name of Injured/Ill Employee: <i>Aurelo Perez, Sr.</i>		2. Sex: <i>M</i>	3. Victim's Age: <i>65</i>	4. Degree of Injury: <i>01 Fatal</i>					
5. Date(MM/DD/YYYY) and Time(24 Hr.) Of Death: <i>a. Date: 06/13/2018 b. Time: 15:20</i>				6. Date and Time Started: <i>a. Date: 06/13/2018 b. Time: 7:00</i>					
7. Regular Job Title: <i>176 Haul Truck Driver</i>			8. Work Activity when Injured: <i>055 Driving haul truck</i>			9. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
10. Experience		a. This		b. Regular		c. This		d. Total	
Years	Weeks	Days	Years	Weeks	Days	Years	Weeks	Days	Days
Work Activity:	<i>3</i>	<i>1</i>	<i>0</i>	Job Title:	<i>3</i>	<i>1</i>	<i>0</i>	Mining:	<i>3</i> <i>1</i> <i>0</i>
11. What Directly Inflicted Injury or Illness? <i>126 Holding pond</i>					12. Nature of Injury or Illness: <i>110 Drowning</i>				
13. Training Deficiencies:									
Hazard:		New/Newly-Employed Experienced Miner:			Annual:		Task:		
14. Company of Employment: (If different from production operator) <i>Operator</i>						Independent Contractor ID: (if applicable)			
15. On-site Emergency Medical Treatment:									
Not Applicable:		First-Aid:		CPR:		EMT: <input checked="" type="checkbox"/>		Medical Professional: <input checked="" type="checkbox"/> None:	
16. Part 50 Document Control Number: (form 7000-1)					17. Union Affiliation of Victim:				