

**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 articulated 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 over burden 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 on 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 he did not think too much about it at the time.

One of these drivers 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 the other 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 drove to the plant and dumped his load. The other went to the pit to get loaded and look around the pit area for Perez.

After dumping his load, the driver looked around the yard, shop and ready line looking 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 (and the victim's son), went to the location on the haul road where the drivers found the

spilled material. Rachel and Martin Perez concluded the truck must have traveled over the berm and entered the impoundment.

## **INVESTIGATION OF ACCIDENT**

Rachel called the MSHA Dallas District office stating a miner was missing and possibly submerged in a water impoundment. At 12:02 p.m., Rachel called 911 to report the accident. At 12:16 p.m., the District office dispatched Tommy Fitzgerald, Mine Safety and Health Inspector, to the scene to investigate.

Rachel later called the Department of Labor's National Contact Center (DOLNCC) at 1:17 p.m. on June 13, 2018. 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 Inc., determined the haul truck had functional steering; emergency park and service braking systems capable of stopping and steering the truck in an emergency. MSHA discovered several non-contributory issues in the examination by MSHA's Technical Support. 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 back to the tank, allowing both accumulators circuits to lose hydraulic pressure without cycling the brakes.

## **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. One of the truck drivers stated he had observed Perez driving over thirty miles per hour in the past. The haul road is well maintained with no obstacles. Berms are provided where needed and maintained mid-axle height along the 9.5 acre fresh water impoundment. The fresh water impoundment holds approximately 20,000 cubic feet of water. 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 conditions 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 Articulating Haul Truck, Vehicle identification number A40DV13162. In early April 2018, the mine operator reported the brakes locked up on the rear axle and asked ROMCO Equipment Company to evaluate the problem. The brakes 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**

Perez and all the haul truck drivers interviewed 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 articulated 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, from the investigation, the investigators were unable to determine why the driver was unable to maintain control of equipment.

### **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 Rachel *	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

Event Number: 6 7 3 9 5 9 3

**U.S. Department of Labor**

Mine Safety and Health Administration



Victim Information: 1

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/YY) 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? <div style="text-align: right;">Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></div>	
10. Experience a. This Work Activity: <i>3</i> <i>1</i> <i>0</i>		b. Regular Job Title: <i>3</i> <i>1</i> <i>0</i>		c. This Mine: <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: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>					
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: <input type="checkbox"/> First Aid: <input type="checkbox"/> CPR: <input type="checkbox"/> EMT: <input checked="" type="checkbox"/> Medical Professional: <input checked="" type="checkbox"/> None: <input type="checkbox"/>					
16. Part 50 Document Control Number: (form 7000-1)			17. Union Affiliation of Victim:		