

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface
(Sand, Industrial)

Fatal Handling Material Accident
June 7, 2021

Plant #10
R.E. Janes Gravel Company
Slaton, Crosby County, Texas
ID No. 41-01111

Accident Investigator

Wesley Hackworth
Supervisory Mine Safety and Health Inspector

Erin Estrada
Mine Safety and Health Inspector

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

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OVERVIEW

On June 7, 2021, at approximately 8:00 a.m., Rogelio Garcia-Rivera, a 55 year-old hopper operator with over six years of mining experience, was fatally injured when he was engulfed by materials inside the grizzly feed hopper. Garcia-Rivera entered the grizzly feed hopper to clear a blockage at the bottom of the grizzly feed hopper. Garcia-Rivera was attempting to clear the blockage when a large amount of material dislodged and engulfed him.

The accident occurred because the mine operator did not: 1) have effective policies, procedures and adequate training to address safety aspects associated with working inside the grizzly feed hopper, and 2) have an effective means of handling material.

GENERAL INFORMATION

R.E. Janes Gravel Company owns and operates the Plant #10 mine in Slaton, Crosby County, Texas and employs 25 miners. The mine operates one ten-hour shift, six days a week. Miners use an excavator to mine material in an open pit. Miners stockpile material in the pit area and use front-end loaders to load haul trucks. The haul trucks transport the material to the primary plant and dump it into the grizzly feed hopper or place it into a raw material stockpile west of the primary plant. At the bottom of the grizzly feed hopper, a feeder conveys the material from the grizzly feed

hopper onto the primary feed belt conveyor. The material is then crushed, screened, and washed at the main plant to produce various sizes of construction sand for commercial uses.

The principal officers for R.E. Janes Gravel Company at the time of the accident were:

Brian T. Etchison	Co-President
Ralph E. Janes IV	Co-President
Kyle Gayler	Chief Financial Officer

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on November 17, 2020. The 2020 non-fatal days lost (NFDL) incident rate for Plant #10 is 4.83 compared to the national average of 1.69 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On June 7, 2021, Garcia-Rivera arrived on-site at 5:45 a.m. and went to the grizzly feed hopper. Garcia-Rivera's duties included signaling the haul trucks to dump the material onto the grizzly feed hopper and monitoring the grizzly feed hopper and the material discharge process onto the primary feed belt conveyor.

The following information is based on interviews with miners conducted during the investigation. At 6:10 a.m., Salomon Ochoa, Plant Operator, started the primary and secondary plants in preparation for processing raw material. At approximately 7:45 a.m., Garcia-Rivera went down to the primary tunnel entrance area and informed Manuel Castañuela, Mine Foreman, that a large rock was blocking the material flow at the bottom of the grizzly feed hopper. Castañuela stated that he went down towards the tunnel area and could see that there was a rock blocking the material. The belt conveyor continued to run until raw material was no longer discharging onto the belt conveyor. Garcia-Rivera contacted Ochoa via radio and asked him to shut down the plant.

Castañuela stated that after the primary plant shut down, Garcia-Rivera accessed the belt conveyor at the feeder connected to the bottom of the grizzly feed hopper and unsuccessfully attempted to clear the rock blockage with a bar. Castañuela then recalled observing Garcia-Rivera walking up the hill towards the top of the grizzly feed hopper. Castañuela and Maximo Castañeda, Laborer, continued to clear rock off the elevated platforms near the feeder.

Around 8:00 a.m., Luis Legarda, Truck Driver, was nearing the approach to the grizzly feed hopper when he noticed Garcia-Rivera on top of the grizzly feed hopper wearing a fall protection harness. He also noticed that the dump signal light was not on and parked his truck. Legarda walked up to the top of the grizzly feed hopper and observed Garcia-Rivera below, inside the grizzly feed hopper, trying to break up a rock with a pry bar. While observing Garcia-Rivera trying to break up the rock, Legarda saw material slide down around Garcia-Rivera, covering Garcia-Rivera up to his knees.

Garcia-Rivera freed himself from the material and continued to attempt to break up the large rock. Legarda stated he told Garcia-Rivera to be careful. Garcia-Rivera looked up at Legarda and resumed hitting the rock with a pry bar. Legarda stated that Garcia-Rivera slipped and material slid down from the sides of the grizzly feed hopper and covered Garcia-Rivera. Legarda went to the west side of the grizzly feed hopper and attempted to pull on the fall protection cable attached to Garcia-Rivera, but it was partially buried as well. Legarda radioed Ochoa for help and then went to

the walkway path on the east side of the grizzly feed hopper and called out to Castañuela to inform him that Garcia-Rivera was covered up inside the grizzly feed hopper. According to the call log on Castañuela's cell phone, Castañuela called Jose Olivo, Operations Manager, at 8:01 a.m. and informed him that Garcia-Rivera was engulfed in material inside the grizzly feed hopper.

At 8:07 a.m., Lamberto Pina, Office Manager, called the Lubbock, Texas Emergency Medical Services (EMS) for assistance. Garcia-Rivera was partially exposed in the grizzly feed hopper and several miners tried to free Garcia-Rivera by removing material by hand and shoveling at the feeder. EMS arrived on the scene at 8:28 a.m. along with the Lubbock Fire Department. EMS notified the mine operator that Garcia-Rivera no longer exhibited signs of life and took over the recovery efforts. The Lubbock Fire Department extricated Garcia-Rivera from the feeder at approximately 9:55 a.m. Irma Casias, Crosby County Justice of the Peace, pronounced Garcia-Rivera dead at 10:38 a.m.

INVESTIGATION OF THE ACCIDENT

On June 7, 2021, at 8:13 a.m. Miguel Flores, Director of Safety and Training, called the Department of Labor National Contact Center (DOLNCC). The DOLNCC contacted Nicholas Gutierrez, Assistant District Manager. Gutierrez contacted Darwin Bratcher, Supervisory Mine Safety and Health Inspector, and sent him to the mine. Bratcher issued an order over the telephone at 9:05 a.m. to the mine operator under the provisions of Section 103(j) of the Mine Act to assure the safety of miners and preservation of evidence.

Bratcher arrived at the site at 11:35 a.m., modified the 103(j) order to a 103(k) order, and began gathering information in preparation for the lead investigator's arrival. Gutierrez assigned Wesley Hackworth, Supervisory Mine Safety and Health Inspector, as the Accident Investigator Team Leader and sent him to the mine site. Erin Estrada, Mine Safety and Health Inspector, also assisted with the accident investigation. MSHA's accident investigation team conducted an examination of the accident scene, interviewed miners, and reviewed conditions, policies, and work procedures relevant to the accident. Investigators also reviewed the training records for Garcia-Rivera and associated training materials. See Appendix A for a list of persons who participated in the investigation.

DISCUSSION

Location of the Accident

The accident occurred at the plant's grizzly feed hopper (see Appendix B).

Equipment Involved

The grizzly feed hopper is an Aggregate Plant Products drive-over grizzly feed hopper that measures 14 feet by 32 feet. There were three 480 Volts Alternating Current vibrators mounted on the lower discharge section of the grizzly feed hopper to clear blockages. The vibrators are located on the west, south, and east sides of grizzly feed hopper. The vibrators were not effective at removing blockages caused by large rocks and were not used at the time of the accident. The grizzly grates on top of the grizzly feed hopper are constructed of steel railroad rails that run from north to south and are spaced approximately 12 inches apart, spanning across the length of the top of the grizzly feed hopper structure. Two support beams, approximately eight feet apart, run from

east to west and support the grizzly grates. Two deflectors, running north and south, deflect the material into the center of the grizzly feed hopper when trucks dump material onto the grating.

The feeder is a Noble 36-inch, single flow feeder that discharges raw material onto the primary 42-inch belt conveyor.

Safe Access

During interviews with mine employees and mine management, investigators discovered that accessing the inside of the grizzly feed hopper by entering through the grizzly grates was a common practice that occurred on at least two separate occasions in the last few months. Other miners indicated that this practice occurred once or twice per month or, at times, once per week.

Employees used a steel cable that runs along the south side of the grizzly feed hopper from east to west as a tie-off for fall protection when they walk across the grizzly feed hopper area.

Investigators found the steel cable was loose and not secured properly. There was no ladder, staging, or platforms within the grizzly feed hopper for safe access. It was necessary for employees to maneuver down between gaps in the steel grate beams to enter the grizzly feed hopper and pull themselves out using the 5/8-inch diameter steel cable lifeline anchored to a pipe on the southwest corner of the grizzly feed hopper area.

Legarda observed Garcia-Rivera in the grizzly feed hopper wearing a fall protection harness and lanyard secured to the steel cable. MSHA's regulations require persons entering hoppers to wear a safety belt or harness equipped with a lifeline suitably fastened. A second person, similarly equipped, must be stationed near where the lifeline is fastened and constantly adjust it or keep it tight as needed, with minimum slack. Legarda was not stationed near the lifeline, nor was he assigned to do so based on the grizzly feed hopper operating procedures established by the mine operator.

Garcia-Rivera entered the grizzly feed hopper to clear a blockage without the use of a second person to tend his lifeline, and while material was still present on the sides of the grizzly feed hopper. As he attempted to break up a large rock blocking the material feed, Garcia-Rivera became engulfed in sliding material that was suspended above him on the sides of the grizzly feed hopper.

Weather

The weather at the time of the accident was approximately 70 degrees with light SSW winds. Investigators determined that weather was not a factor in the accident.

Training and Experience

The accident investigation team reviewed training records. Rogelio Garcia-Rivera had six years and nine months of mining experience (six years of experience as a hopper operator), all at the Plant #10 mine. He received new miner training in September of 2014 and annual refresher training in December of 2020 in accordance with MSHA Part 46 training regulations. Garcia-Rivera received task training on several subjects since beginning work at the mine. Records indicated that he received five hours of training as a hopper operator in May of 2015, however, the mine operator did not adequately train Garcia-Rivera to perform all the duties assigned as a hopper operator.

Policy and Procedures

The mine operator did not have a confined space policy or adequate task training for confined spaces and did not provide an effective procedure to address safety aspects associated with working inside the grizzly feed hopper. The tasks assigned to a hopper operator are listed within the mine's training plan.

Examinations

Ochoa conducts the workplace examinations in the plant area, which includes the grizzly feed hopper. Ochoa conducted the workplace examinations for the drive-over grizzly feed hopper area on the day of the accident. The records did not indicate any deficiencies with the drive-over grizzly feed hopper and the feeder.

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 reoccurrence.

1. Root Cause: The mine operator did not have effective policies, procedures and adequate training to address safety aspects associated with working inside the grizzly feed hopper.

Corrective Action: The mine operator developed new written policies, procedures, and additional training material to address safety aspects associated with working inside the grizzly feed hopper. The new written policies and procedures require: (1) the hopper to be empty before a miner enters, and (2) the hopper to only be entered for maintenance and inspection purposes. Additionally, the mine operator designed a safe means of access to work around the top of, and inside, an empty grizzly feed hopper. The procedures also included: A) construction of a work platform, B) relocation of the access door and fall protection anchor points, and C) installation of an opening in the grating with ladder access and a fall protection and retrieval system. The mine operator provided training to all affected employees and managers in the revised policies, procedures, and new designs.

2. Root Cause: The mine operator did not provide an effective means of handling material.

Corrective Action: The mine operator implemented a prescreening process in the pit with a scalping screen that reduces the size of the material and removes larger pieces that potentially can cause blockages. The mine operator also developed a new written procedure that requires miners to assure the use of the mechanical vibratory devices to dislodge material. The process of prescreening and using the vibratory devices on the hopper have been tested and determined to be effective. In the event a blockage does occur, the mine operator will remove the blockage in a manner that does not involve a miner entering the grizzly feed hopper.

CONCLUSION

On June 7, 2021, at approximately 8:00 a.m., Rogelio Garcia-Rivera, a 55 year-old hopper operator with over six years of mining experience, was fatally injured when he was engulfed by materials inside the grizzly feed hopper. Garcia-Rivera entered the grizzly feed hopper to clear a blockage at the bottom of the grizzly feed hopper. Garcia-Rivera was attempting to clear the blockage when a large amount of material dislodged and engulfed him.

The accident occurred because the mine operator did not: 1) have effective policies, procedures and adequate training to address safety aspects associated with working inside the grizzly feed hopper, and 2) have an effective means of handling material.

Approved By:

William D. O'Dell
District Manager

Date

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to R.E Janes Gravel Company on June 7, 2021.

A fatal accident occurred on June 7, 2021, at approximately 8:00 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(d)(1) citation was issued to R.E. Janes Gravel Company for violation of 30 CFR 56.16002

On June 7, 2021, a fatal accident occurred at this mine when a miner entered the grizzly feed hopper and was engulfed by sliding material. The miner entered the grizzly feed hopper to clear a blockage at the bottom of the grizzly feed hopper. As the miner worked to clear the blockage, loose unconsolidated material engulfed the miner. The mine operator did not provide a safe means of access, an effective means of handling material, or provide an effective procedure to address all safety aspects associated with working inside of the grizzly feed hopper. This is an unwarrantable failure to comply with a mandatory standard.

3. A 104(d)(1) order was issued to R.E. Janes Gravel Company for violation of 30 CFR 46.7

On June 7, 2021, a fatal accident occurred at this mine when a miner entered the grizzly feed hopper and was engulfed by sliding material. The miner entered the grizzly feed hopper to clear a blockage at the bottom of the grizzly feed hopper. As the miner worked to clear the blockage, loose unconsolidated material engulfed the miner. Garcia-Rivera was not adequately trained to perform the duties assigned as a hopper operator. The mine operator did not provide an effective procedure to address all safety aspects associated with working inside of the grizzly feed hopper. This is an unwarrantable failure to comply with a mandatory standard.

APPENDIX A – Persons Participating in the Investigation

R.E. Janes Gravel Company

Travis Massey	Vice President of Operations
Jose Olivo	Operations Manager
Lamberto Pina	Office Manager
Miguel Flores	Director of Safety and Training
Manuel Castañuela	Mine Foreman
Salomon Ochoa	Plant Operator
Luis Legarda	Truck Driver
Maximo Castañeda	Laborer

Law Office of Adele L. Abrahams

Michael Peelish	Attorney
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Crosby County

Irma Casias	Justice of the Peace
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Mine Safety and Health Administration

Nicholas Gutierrez	Assistant District Manager
Darwin Bratcher	Supervisory Mine Safety and Health Inspector
Wesley Hackworth	Supervisory Mine Safety and Health Inspector
Erin Estrada	Mine Safety and Health Inspector

APPENDIX B – Inside View of Grizzly Feed Hopper Area

