MAI-2017-13

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION
Metal and Nonmetal Mine Safety and Health

REPORT OF INVESTIGATION
Surface Non-Metal Mine
(Cement)

Fatal Powered Haulage Accident
December 30, 2017

At
Lehigh Southwest Cement Co.
Permanente Cement Plant and Quarry
Cupertino, Santa Clara County, California
Mine ID No. 04-04075

Investigators

Benjamin Burns
Mine Safety Health Inspector

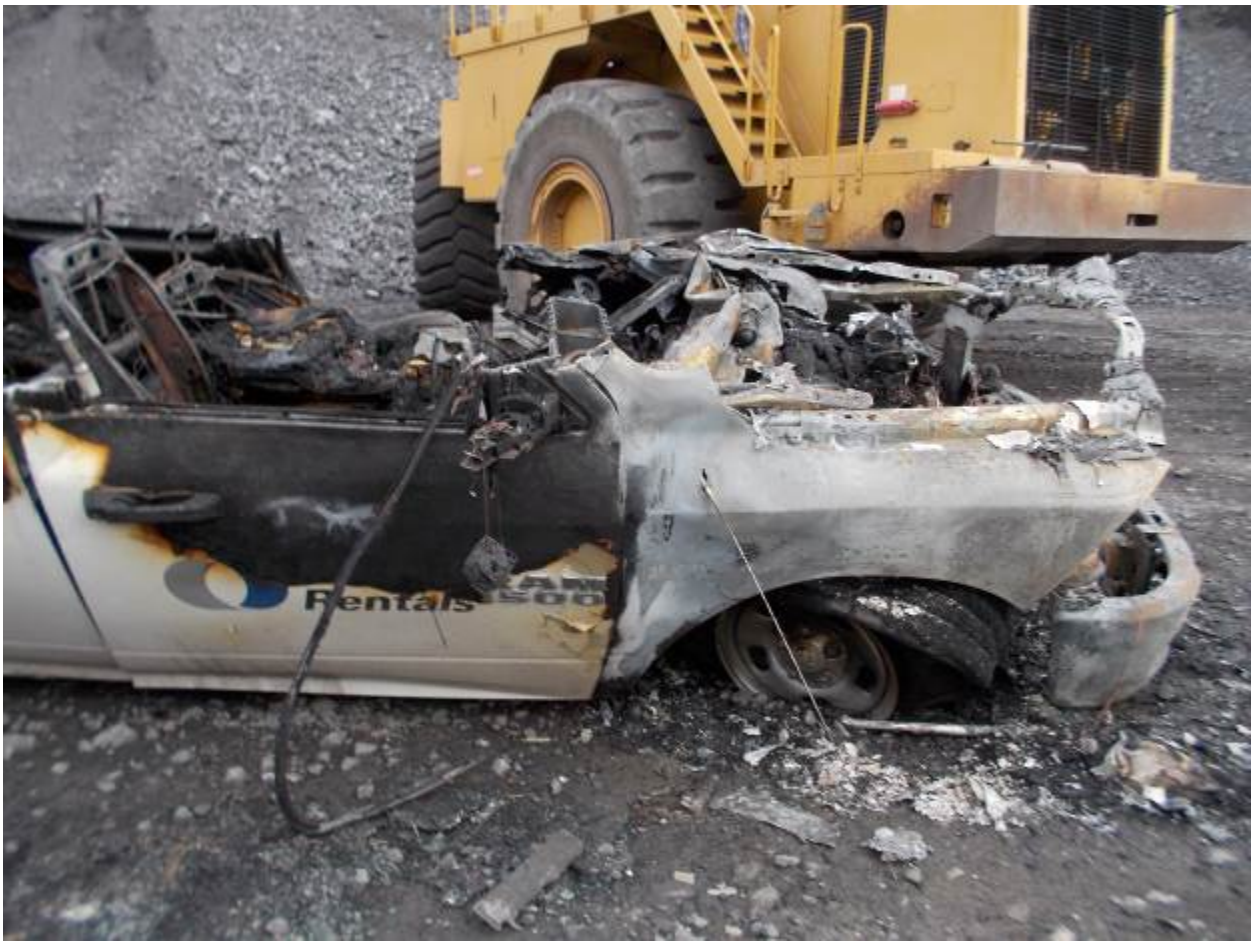
Jose Figueroa
Mine Safety Health Specialist

Troy Van Wey
Supervisory Mine Safety Health Inspector

Originating Office

Mine Safety Health Administration
Western District
991 Nut Tree Road
Vacaville, CA 95687
John D. Pereza, Acting District Manager

Table of Contents



OVERVIEW

Jose Rivas, a 56-year old laborer, died on December 30, 2017, when a front end loader backed into his pickup truck pushing it sideways and crushing the driver's side of the truck's cab, trapping the victim as the truck caught fire. Several mine employees attempted to extinguish the fire, but were unsuccessful.

The accident occurred because management did not have policies, procedures and controls to address safe movement, including positive communication, for small mobile equipment operators when operating near or around large equipment.

GENERAL INFORMATION

Lehigh Southwest Cement Co. owns and operates the Permanente Cement Plant and Quarry, a surface hydraulic cement operation located in Cupertino, Santa Clara County, California. Keith Krugh is the Plant Manager. The quarry portion of this operation employs 18 miners, operating seven days per week with two, eight-hour hour shifts per day. On the day of the accident, the mine was operating on a holiday schedule from 5:00 a.m. to 1:30 p.m.

Limestone is drilled and blasted. The material is loaded onto haul trucks by front end loaders and delivered to the primary crusher. After the material is crushed, surface conveyor belts transport it to the cement plant to manufacture various types of hydraulic cement. The Mine Safety and Health Administration (MSHA) completed the last regular inspection at this operation on August 4, 2017.

DESCRIPTION OF ACCIDENT

On Saturday, December 30, 2017, Jose Rivas (victim), a laborer, began work at 5:00 a.m. by attending a meeting where Joey Gonzalez (leadman) assigned job responsibilities to the crew. Rivas was assigned to clean the catwalk around the crusher. At approximately 7:00 a.m. he was assigned to collect rock samples from the 1250 stockpile area of the quarry. At approximately 8:30 a.m., Rivas reported sample results to Pastore Lopez (front end loader operator) and Ruben Cortes (crusher operator), on channel no. 2 of the company radio and then returned to cleaning the catwalk around the crusher.

Gonzalez assigned Lopez to the 1250 stockpile area. Lopez was not the regular front end loader operator on day shift. He normally worked on the night shift. He was working this shift because of the holiday schedule. On this morning, Lopez loaded a haul truck twice with material. While waiting for the haul truck to return from the primary crusher, Lopez started cleaning the pit floor and pushing spillage back into the pile.

Gonzalez called Rivas over the company radio channel no. 2 at 9:15 a.m. and instructed him to pick up Lopez and Antonio Berrospe (haul truck operator) for lunch. Rivas drove a Dodge 1500 pickup truck to the 1250 stockpile area to pick up Lopez. Rivas arrived at 9:23 a.m. When Rivas entered the area, he drove on the east side of the pit and parked directly behind the front end loader. The haul truck and front end loader operators were communicating on channel no. 2 of their company radios – the same channel Rivas used to report the rock sample results to Cortes and Lopez earlier in the shift. Berrospe and Lopez did not hear Rivas call over the radio when he entered the 1250 stockpile area, and according to employee interviews, Rivas did not otherwise make his presence known to Lopez.

Lopez was backing up to push spillage back onto the pile when he noticed something white and saw smoke in the front end loader's side mirror. After exiting the front end loader, Lopez realized he hit Riva's pickup truck and radioed Gonzalez to come to the 1250 stockpile area. Lopez exited the front end loader and saw Rivas pinned in the cab of the burning pickup truck. When Gonzalez arrived in the pit, he, along with Lopez and Cortes, attempted to put the fire out and pull Rivas from the vehicle. Despite using three fire extinguishers, they were unable to control the fire. They also attempted to pry the truck driver side door open with a shovel but were unsuccessful. The fire worsened, forcing the men to abandon their rescue efforts. The investigation revealed the collision prevented the seat belt buckle from being unfastened.

After the initial radio call from Lopez, Angel Checa, control operator trainee, called 911 at 9:36 a.m. The Santa Clara County Fire Department and California Highway Patrol Emergency Services arrived at 9:40 a.m. Santa Clara County Fire Department paramedics pronounced Rivas dead at 9:44 a.m.

INVESTIGATION OF ACCIDENT

Keith Krugh Sr., plant manager, called the Department of Labor National Contact Center (DOLNCC) at 9:55 a.m., December 30, 2017, and notified MSHA of the accident. The DOLNCC contacted Gary Hebel, MSHA Western District field office supervisor. MSHA issued an order under provisions of Section 103(k) of the Mine Act to secure the accident scene to ensure the safety of the miners and began the investigation.

MSHA' s accident investigation team conducted a physical inspection of the accident scene, interviewed employees, reviewed training documentation, and examined work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management, employees, contractors, Santa Clara County sheriff's office, State of California Cal/OSHA Tunneling Unit officials, Operating Engineers Local No. 3 AFL-CIO representative and the operator's attorney.

DISCUSSION

Location of the accident

The accident occurred on the 1250 stockpile area. The 1250 stockpile measured approximately 50 feet to 60 feet high at the time of the accident. The stockpile area measured 147 feet east to west and 270 feet north to south.

Equipment involved in the accident

2014 Dodge 1500

Rivas operated a 2014 Dodge 1500 4-door cab. It measured 19 feet long and 6 ½ feet wide with an approximate weight of 5,000 lbs. The mine operator's examination and repair records indicated no defects on this vehicle.

Investigators examined the Dodge pickup truck and its position. Tire marks on the ground indicated the front end loader pushed the pickup approximately 17 feet. Because the driver's side of the cab was crushed inwards, recovery workers had to remove the cab's top to extract Rivas. Investigators found that the door damage also made the seat belt latch inaccessible to the victim. The fire burned the seatbelt webbing but the buckle was fastened. Severe damage to the vehicle prevented investigators from determining which gear was engaged on the truck. The pickup truck had no fixed radio installed. The fire destroyed the radio Rivas was carrying, so investigators were unable to determine the channel he may have used to communicate with the front end loader operator when he entered the stockpile area. Due to the fire, investigators could not test the vehicle for defects.

Front End Loader

The front end loader involved in the accident was a 2005 Caterpillar (CAT) 992G model. The front end loader measured 51 feet 11 inches long, 15 feet wide, 19 feet high, and it weighed about 220,000 pounds.

The investigators found the company radio, which was mounted in the cab, on channel no. 4 (plant operations) with the volume control at an audible level. Investigators believed Lopez switched the radio channel from no. 2 to no. 4 to alert management of the accident.

The mine operator examination and repair records for the front end loader did not identify defects. Investigators found the AM/ FM radio installed on the front end loader to be in the "off" position, and did not consider it a distraction to the operator.

The investigators tested the service brakes, center pins, lights, wipers, mirrors, audible warning devices and parking brake and found these all functioned as required.

Weather

Investigators reported the weather in the area at the time of the accident as slightly foggy to sunny with no wind. The temperature ranged from 40 degrees to 61 degrees Fahrenheit. Investigators did not consider weather to be a factor in the accident.

Training and experience

Rivas had over 12 years of mining experience at this mine, and over 10 years as a laborer. Investigators reviewed the operator's training plan and records and found they were not in compliance with MSHA Part 46. The mine operator did not provide new task training on safe movement for light duty trucks operating around large mobile equipment. MSHA issued a violation of 46.7 (a) to the mine operator under a spot inspection.

Investigators found that management did not have policies, procedures and controls to address safe movement, including positive communication, for small mobile equipment operators when operating near or around large equipment. Investigators found no task training records related to how light vehicle drivers communicate with large mobile equipment operators.

ROOT CAUSE ANALYSIS

MSHA conducted a root cause analysis and identified the following root causes:

Root Cause: Management did not have policies, procedures and controls to address safe movement, including positive communication, for small mobile equipment operators when operating near or around large equipment.

Corrective Action: The Company developed policies, procedures and new training materials, adding information concerning pre- and post-trip inspections, small equipment operation around large mobile equipment, the dangers of blind spots, radio and other communications in vehicle traffic, the hazards and parking procedures around large mobile equipment, and reporting of safety defects. The workforce at the mine was retrained using the new policies and procedures and training material.

CONCLUSION

Jose Rivas died when a front end loader backed into his pickup truck, pushing and crushing the driver's side of the truck's cab, trapping the victim as it caught fire. The accident occurred because management did not have policies, procedures and controls to address safe movement, including positive communication, for small mobile equipment operators when operating near or around large equipment.

ENFORCEMENT ACTIONS

Issued to Lehigh Southwest Cement Co. Permanente Cement Plant and Quarry

Order No.8879649 was issued under the provisions of section 103(j) of the Mine Act and modified to a 103(k) upon arrival:

An accident occurred at this operation on December 30, 2017, at approximately 09:25 a.m. As rescue and recovery work is necessary, this order is being issued, under section 103(j) of the Federal Mine Safety and Health Act of 1977, to assure the safety of all persons at this operation. This Order is also being issued to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity at Pond 1250 Reclaimed High Grade Pile until MSHA has determined it is safe to resume normal mining operations in this area. This Order applies to all persons engaged in the rescue and recovery operation and any other persons on-site. This Order was initially issued orally to the mine operator at 10:26 and has now been reduced to writing.

Citation No.8992856 Was issued under the provisions of section 104(a) of the Mine Act for a violation of 56.9100(a)

104(a) S&S Occurred-Fatal-High Negligence

On December 30, 2017, a fatal accident occurred at this mine when a Cat 992G #843-080 front end loader backed into a Dodge 1500 pickup truck. Management did not have policies, procedures and controls to address safe movement, including positive communication, for small mobile equipment operators when operating near or around large equipment.

Approved: _____ Date: _____

John D. Pereza
Acting District Manager

APPENDIX A: Persons Participating in the Investigation
(Persons interviewed are indicated by a * next to their name)

Lehigh Southwest Cement Co. Permanente Cement Plant and Quarry
Keith Krugh - Senior Plant Manager
Eric Powell - Safety Manager
Andrew R. Rigler - Safety Manager North Region
George Taylor - Quarry Manager
Antonio Berrospe* - Haul Truck Operator
Joey Gonzalez* - Equipment Operator, Leadman
Pastore Lopez* - Front End Loader Operator
Ruben Cortes* - Crusher Operator
Hector Martinez* - Equipment Operator, Water Truck
Edwin Trabanino* - Fuel Truck Operator

MPW industrial Services
Jon Bunch* - Water Tech

Ogletree Deakins
Margaret S. Lopez - Attorney at Law

Operating Engineers Local No. 3 AFL-CIO
Glen Knight - Business Representative

State of California Cal/OSHA Tunneling Unit
Jeff Wallace - Associate Safety Engineer
Ronald Aruejo - Senior Safety Engineer

Santa Clara County Sheriff's office
Chris Hilt – Deputy Sheriff

Mine Safety and Health Administration
Benjamin C. Burns - Mine Safety and Health Inspector
Troy Van Wey - Supervisory Mine Safety and Health Inspector
Jose Figueroa - Mine Safety and Health Specialist
Norman Zeeman - Educational Field and Small Mine Services Training Specialist

Appendix B

Accident Investigation Data - Victim Information

Event Number: 6 6 6 5 0 4 2

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

Victim Information: 1

1. Name of Injured/Ill Employee:	2. Sex	3. Victim's Age	4. Degree of Injury:
Jose E. Rivas	M	56	01 Fatal

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 12/30/2017 b.Time: 9:41	a. Date: 12/30/2017 b.Time: 5:00

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
116 Associate B (Laborer)	041 Picking up Co-Worker for lunch	Yes X No

10. Experience	Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days
a. This Work Activity:	10	29	3	b. Regular Job Title:	10	29	3	c. This Mine:	12	41	2	d. Total Mining:	12	41	2

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
045 Thermal Injuries/ Smoke Inhalation	120 Thermal Injuries/ Smoke Inhalation

13. Training Deficiencies:

Hazard: | New/Newly-Employed Experienced Miner: | Annual: | Task: X

14. Company of Employment: (If different from production operator)
Operator

Independent Contractor ID: (if applicable)

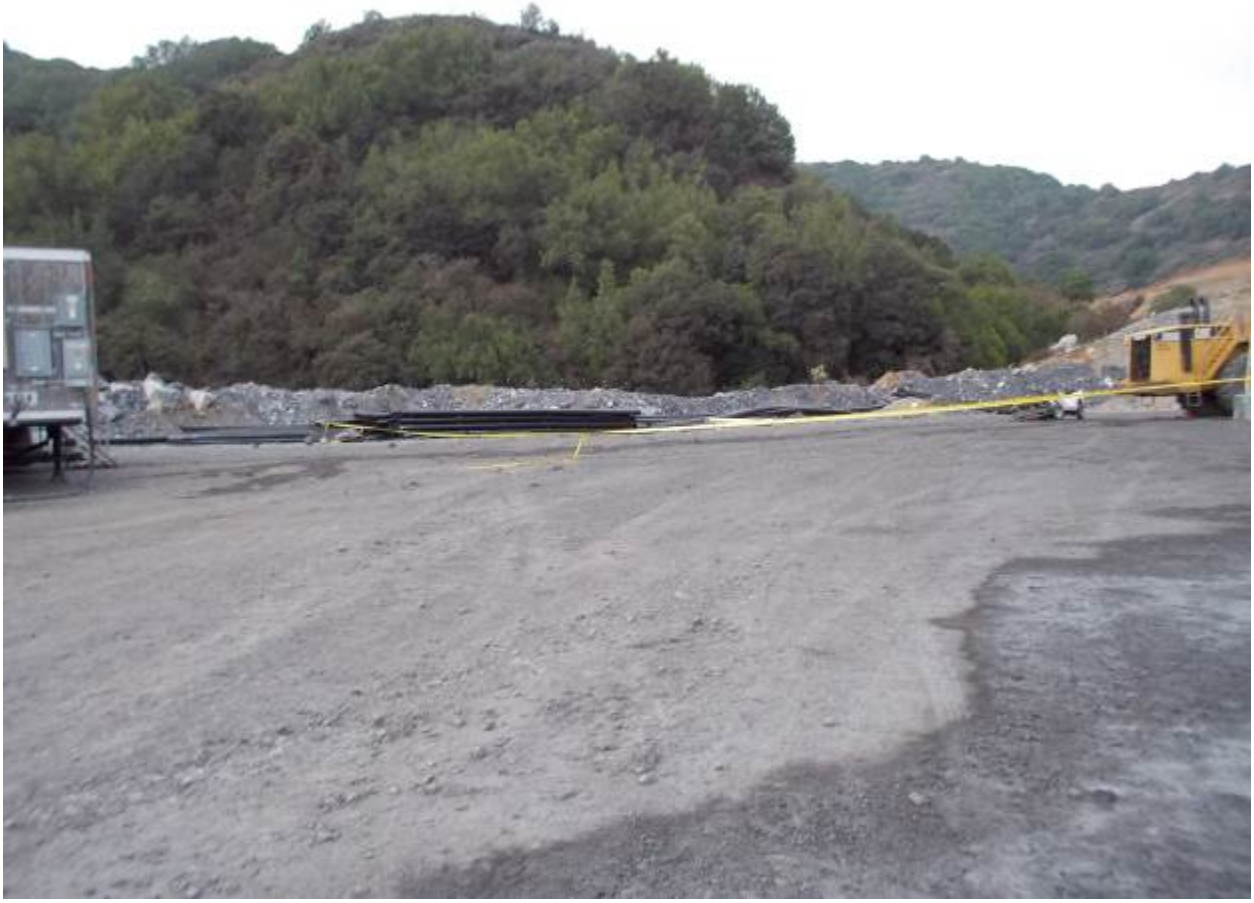
15. On-site Emergency Medical Treatment:

Not Applicable: | First-Aid: | CPR: | EMT: | Medical Professional: | None: X

16. Part 50 Document Control Number: (form 7000-1)

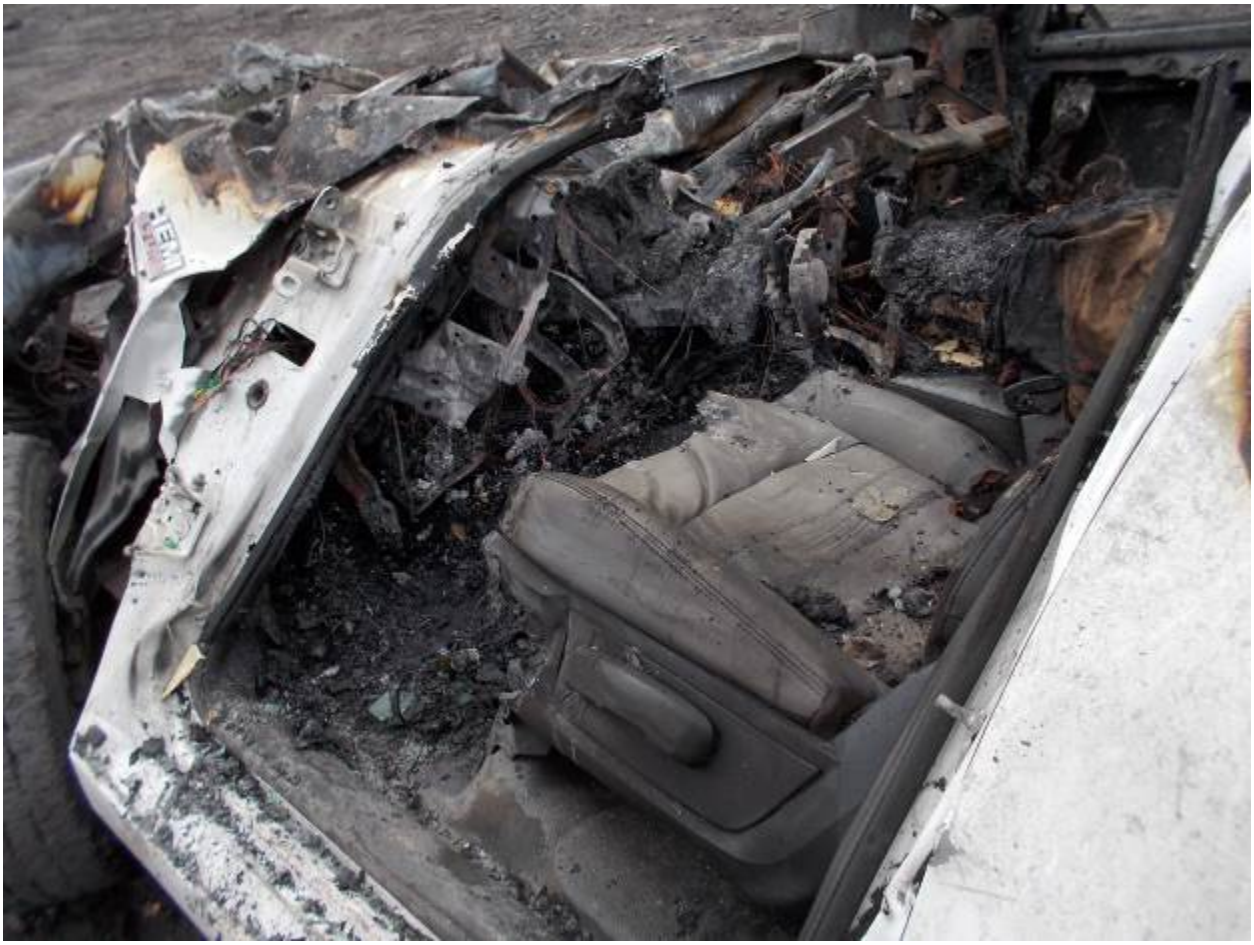
17. Union Affiliation of Victim:

Appendix C
Overview of area looking South East



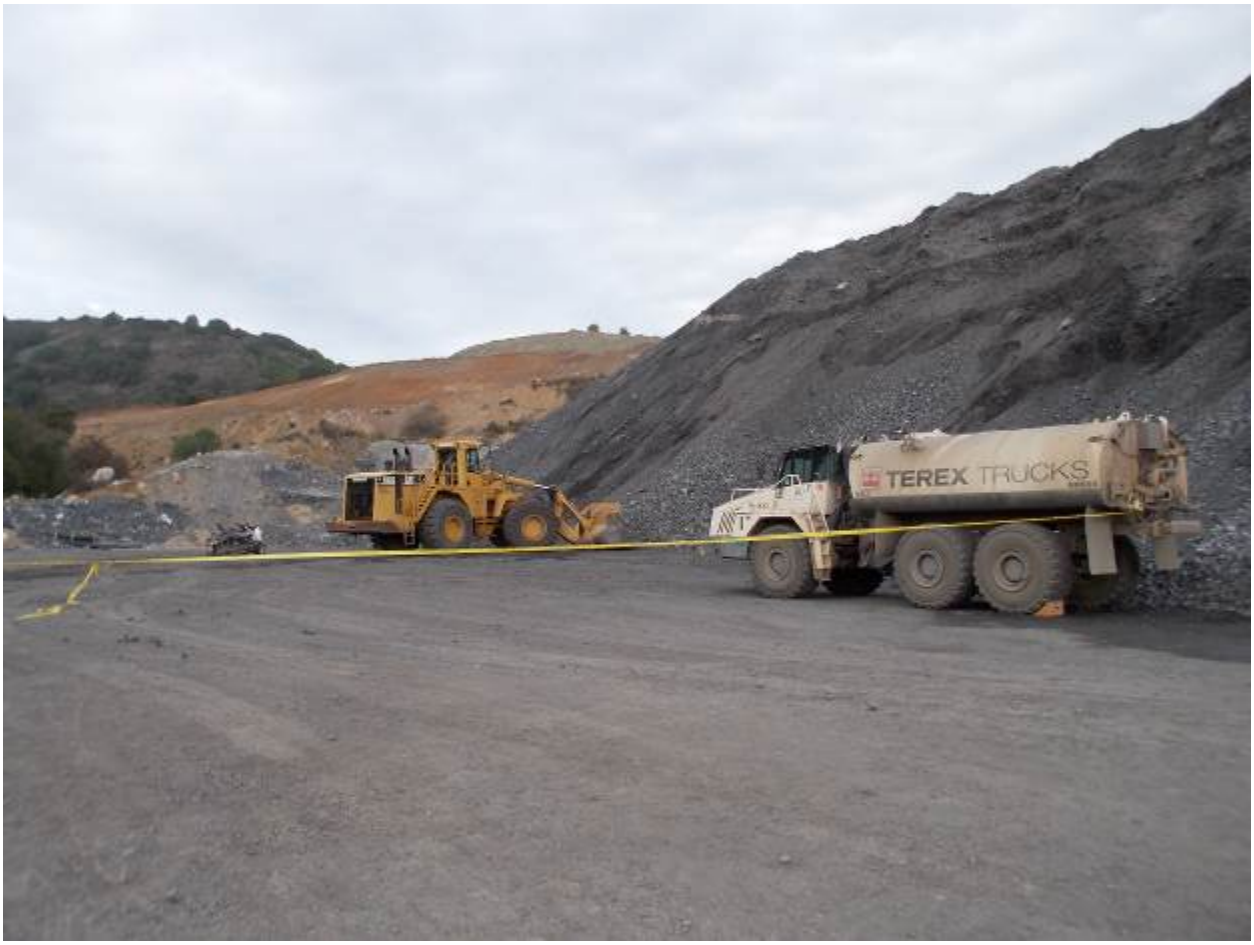
Attachment # C-2

Showing driver's side of cab crushed inward



Attachment # C-3

Overview looking South West



Attachment # C-4

Photo showing where Pickup had been pushed sideways