

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

REPORT OF INVESTIGATION

**Surface Nonmetal Mine
(Gypsum)**

**Fatal Powered Haulage Accident
April 27, 2013**

**Allied Custom Gypsum
ACG #1 Shamrock
Shamrock, Wheeler County, Texas
Mine ID No. 41-04758**

Investigators

**Maria C. Rich
Mine Safety and Health Specialist**

**Darwin L. Bratcher
Mine Safety and Health Inspector**

**Maxwell A. Clark
Electrical Engineer**

**Originating Office
Mine Safety and Health Administration
South Central District
1100 Commerce Street, Room 462
Dallas, TX 75242-0499
Joseph O. Steichen, Acting District Manager**



OVERVIEW

On April 27, 2013, James D. Winegeart, Mechanic, age 58, was killed when he became entangled in the discharge belt conveyor of a mobile crusher. Winegeart was reaching into the belt conveyor, attempting to dislodge a large rock that was lodged between the belt conveyor and the frame of the crusher. The belt conveyor, which was stalled but had not been turned off or locked out, resumed movement after Winegeart dislodged the rock.

The accident occurred due to management's failure to ensure that all persons followed established procedures, which required deenergizing the mobile crusher before performing maintenance work on it. Additionally, moving parts on the belt conveyor were not blocked against hazardous motion.

GENERAL INFORMATION

ACG #1 Shamrock, a surface gypsum operation, owned and operated by Allied Custom Gypsum, is located near Shamrock, Wheeler County, Texas. The principal operating official is Evan Conkling, Area Manager. The mine typically operates one 10-hour shift per day, five days per week. About one month prior to the accident, the mine started operating on Saturdays and Sundays with a partial crew. Total employment is 13 persons.

Gypsum is mined with a portable milling machine and hauled to stockpiles before crushing and screening on-site. Finished materials are loaded into trucks by front-end loaders for delivery to local construction projects.

The Mine Safety and Health Administration (MSHA) completed the last regular inspection at this operation on March 12, 2013.

DESCRIPTION OF THE ACCIDENT

On the day of the accident, April 27, 2013, James Winegeart (victim) reported for work at the mine office about 6:45 a.m. Winegeart started the diesel engine for the mobile crusher, and radioed Ignacio Alvarado, Front-end Loader Operator, that the mobile crusher was ready to operate. Winegeart then operated a haul truck until 9:00 a.m.

Alvarado used a front-end loader to place two or three loads of material into the mobile crusher and then used the loader to feed the screen plant. While Alvarado fed material into the screen plant, Cole Dampier, Front-end Loader Operator, used another front-end loader to alternately feed material into the mobile crusher and load customer trucks.

About 8:30 a.m., Dampier used the hand-held remote radio control unit, that he had placed in the cab of the front-end loader, to move the mobile crusher about 300 feet where there was a stockpile consisting of cleaner material. After that, Dampier noticed

that the discharge belt conveyor was stalled because a large rock was lodged between the belt conveyor and the crusher frame. Dampier backed the mobile crusher about 38 feet from the stockpile. He then unsuccessfully attempted to break the rock manually by hitting it with another rock.

Dampier radioed Earl Carr, Plant Manager, to tell him the mobile crusher was out of service. Earl Carr sent Winegeart to assist Dampier with the mobile crusher. About 9:10 a.m., Winegeart discussed the problem with Dampier and then attempted to free the discharge conveyor by using the on-board hydraulic controls to move it back and forth. When the rock did not dislodge, Winegeart told Dampier that he needed some tools and drove to the shop to get them.

Winegeart returned in a service truck with an air compressor located in the back of the truck. Dampier resumed loading customer trucks and kept the remote control unit for the mobile crusher in the cab of the front-end loader. Winegeart connected an air hammer to the compressor and attempted to break the large rock using a chisel attachment on the air hammer.

About 9:50 a.m., Alvarado and Dampier saw Winegeart at the service truck. At 10:15 a.m., Earl Carr radioed Alvarado to check on Winegeart. Alvarado found Winegeart pinned between a return belt conveyor idler and the frame of the mobile crusher. Winegeart had been reaching into the belt conveyor, attempting to dislodge the rock, when the belt conveyor resumed movement and pulled him over the belt conveyor idler. The discharge belt conveyor and other moving parts on the mobile crusher had not been turned off or locked out.

Alvarado ran to Dampier's front-end loader and told him to stop the mobile crusher using the remote control unit. Dampier stopped the crusher and then called Earl Carr regarding the accident and he contacted April Carr, Office Manager. At 10:20 a.m., she called for emergency medical services (EMS). EMS arrived at the mine at 10:39 a.m. and the victim was pronounced dead at the scene at 10:51 a.m. The cause of death was attributed to blunt force injuries.

INVESTIGATION OF THE ACCIDENT

MSHA was notified of the accident at 10:54 a.m. by a telephone call from Corey Cofer, Environmental Safety and Health Manager, to the National Call Center. The National Call Center notified Michael Franklin, Supervisory Special Investigator, and an investigation was started the same day. An order was issued under provisions of Section 103(j) of the Mine Act. This order was later modified to Section 103(k) of the Mine Act after the arrival of an Authorized Representative at the mine site.

MSHA's accident investigation team traveled to the mine, made a physical inspection of the accident scene, interviewed employees, and reviewed documents and work

procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management and employees.

DISCUSSION

Location of the Accident

The accident occurred at the processing area of the mine. Rock was crushed, screened, and loaded into customer trucks in this area. This area was relatively flat and dry at the time of the accident.

Mobile Crusher

The mobile crusher involved in the accident was a track-mounted impact-type crusher equipped with a large feeder, a discharge belt conveyor that folded for transportation, and a magnet to remove metallic waste from the crushed material. The mobile crusher weighed 101,100 pounds with all of the attached equipment.

The mobile crusher was powered by a diesel engine that required two keys for starting. The diesel engine also powered a hydraulic system that powered the 12-inch diameter head pulley of the 48-inch wide discharge belt conveyor. To prevent unintended startup during maintenance, management had developed a procedure requiring persons performing maintenance to remove both diesel engine keys and lock them together before beginning work. However, this procedure was not followed at the time of the accident. When the rock became lodged between the belt conveyor and the frame, the belt conveyor stalled but resumed movement when the rock was dislodged because these established procedures were not followed.

The mobile crusher could be operated by using on-board hydraulic controls or by using a hand-held remote radio control unit. The on-board controls could be used to operate the feeder and the discharge belt conveyor. There was no emergency stop button on the on-board hydraulic controls.

The remote control unit could be used to tram the mobile crusher and to operate the feeder and discharge belt conveyor. The remote control unit had one red emergency stop button that could disengage the diesel motor, which would stop the mobile crusher and all hydraulic-powered movement of the feeder and discharge belt conveyor. The remote control unit for the mobile crusher was still in the front-end loader Dampier was operating at the time of the accident. The emergency stop button had not been activated.

Weather

The weather at the time of the accident was clear with a temperature about 60 degrees Fahrenheit. Weather was not considered to be a factor in the accident.

TRAINING AND EXPERIENCE

James Winegeart (victim) had two years of mining experience all at this mine. Investigators reviewed Winegeart's training records and found his training to be in compliance with MSHA requirements.

ROOT CAUSE ANALYSIS

The investigators conducted a root cause analysis and the following root cause was identified:

Root Cause: Management failed to ensure that persons followed previously established procedures to deenergize the crusher before performing maintenance work. Additionally, the discharge belt conveyor was not blocked against hazardous motion.

Corrective Action: Management retrained all miners regarding established procedures to deenergize the mobile crusher and block moving machine parts against hazardous motion before maintenance work begins.

CONCLUSION

The accident occurred due to management's failure to ensure that all persons followed established procedures, which required deenergizing the mobile crusher before performing maintenance work on it. Additionally, moving parts on the belt conveyor were not blocked against hazardous motion.

ENFORCEMENT ACTIONS

Issued to Allied Custom Gypsum

Citation 8684167 – Issued on April 27, 2013, under the provisions of Section 103(j) of the Mine Act. An Authorized Representative modified this order to Section 103(k) of the Mine Act upon arrival at the mine site:

A fatal accident occurred at this operation on April 27, 2013. This order is being issued under Section 103(j) of the Federal Mine Safety and Health Act of 1977 to prevent the destruction of any evidence which would assist in investigating the causes of the accident. It prohibits all activity at the portable crusher area until MSHA has determined that it is safe to resume normal mining operations. This order was initially issued orally to the mine operator at 10:40 a.m. and has now been reduced to writing.

This order was terminated on May 15, 2013, when conditions that contributed to the accident no longer existed.

Citation 6315030 – Issued under provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 56.14105:

A fatal accident occurred at this operation on April 27, 2013, when a mechanic became entangled in the discharge conveyor of a portable crusher. The mechanic had been attempting to dislodge a rock from the conveyor without turning off the power to the conveyor and blocking it against hazardous motion.

Approved: Joseph O. Steichen
Joseph O. Steichen
Acting District Manager

Date: July 8, 2013

APPENDIX A

PERSONS PARTICIPATING IN THE INVESTIGATION

Allied Custom Gypsum

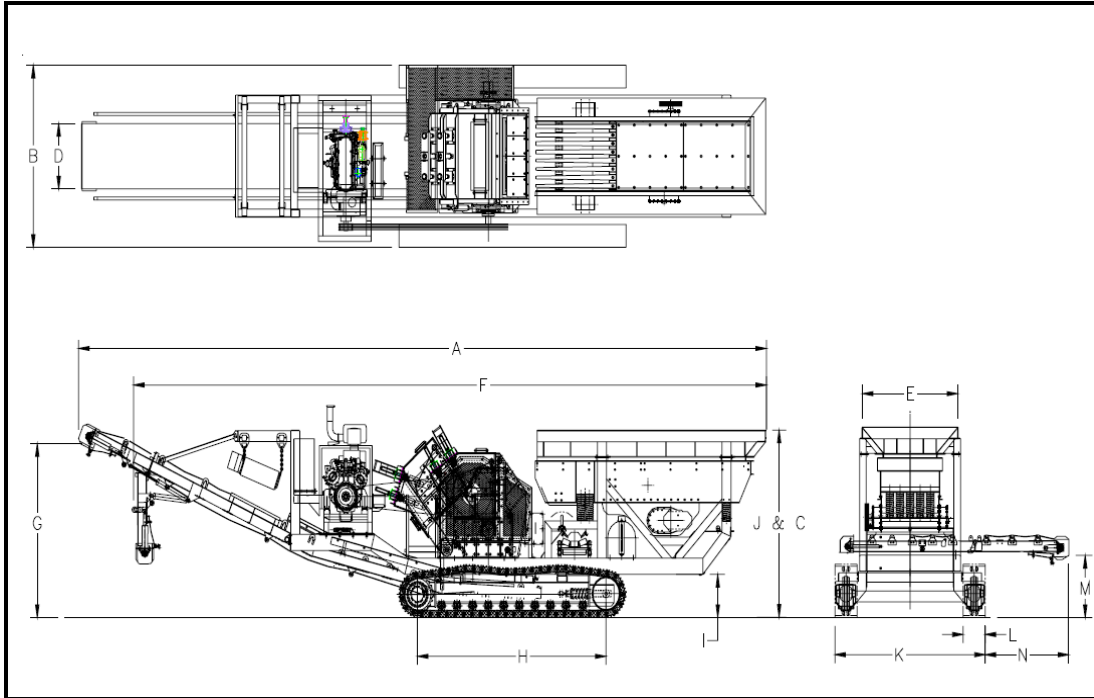
Kris Kinder	Vice-President of Operations
Corey Cofer	Environmental Safety and Health Manager
Evan Conkling	Area Manager
Earl Carr	Plant Manager
Lee Graves	General Operations Manager

Mine Safety and Health Administration

Maria C. Rich	Mine Safety and Health Specialist
Darwin L. Bratcher	Mine Safety and Health Inspector
Maxwell A. Clark	Electrical Engineer


APPENDIX B

Mobile Crusher Schematic and Dimensions



Letter	Description	Dimension
A	Overall Length	51'1"
B	Overall Width	11'2"
C	Overall Height	11'6"
D	Discharge Conveyor Width	48"
E	Feeder Opening	7'2"
F	Travel Length	47'3"
G	Discharge Conveyor Height	10'6"
H	Undercarriage Length	14'
I	Chassis Height	2'8"
J	Feeder Height	11'6"
K	Undercarriage Width Outside-Outside	11'2"
L	Track Shoe Width	1'8"
M	Conveyor Height	3'8"
N	Conveyor Overhang	4'2"

APPENDIX C

Accident Investigation Data - Victim Information										U.S. Department of Labor					
Event Number: 6 6 0 8 1 6 1										Mine Safety and Health Administration					
Victim Information: 1															
1. Name of Injured/Ill Employee: <i>James D. Winegeart</i>			2. Sex: <i>M</i>		3. Victim's Age: <i>58</i>		4. Degree of Injury: <i>01 Fatal</i>								
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 04/27/2013 b. Time: 10:51</i>						6. Date and Time Started: <i>a. Date: 04/27/2013 b. Time: 6:45</i>									
7. Regular Job Title: <i>104 Mechanic/Haul Truck Operator</i>				8. Work Activity when Injured: <i>039 Dislodging rock in mobile crusher</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	Years	Weeks	Days				
Work Activity:	2	9	4	Job Title:	2	9	4	Mine:	2	9	4	Mining:	2	9	4
11. What Directly Inflicted Injury or Illness? <i>075 Return idler/frame of crusher</i>						12. Nature of Injury or Illness: <i>170 Crushed by idller & frame of crusher</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: _____ Medical Professional: _____ None: <input checked="" type="checkbox"/>															
16. Part 50 Document Control Number: (form 7000-1)						17. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>									