

MAI-2010-25

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

Metal and Nonmetal Mine Safety and Health

REPORT OF INVESTIGATION

**Surface Nonmetal Mine
(Crushed Aggregate)**

**Fatal Slip or Fall of Person Accident
December 9, 2010**

at

**Blue Star Materials
Chico, Wise County, Texas
Mine I.D. 41-04827**

Investigator

**Jim B. DoByns
Mine Safety and Health Inspector**

**Originating Office
Mine Safety and Health Administration
South Central District
1100 Commerce Street, Room 462
Dallas, Texas 75242
Michael A. Davis, District Manager**



OVERVIEW

Jesus De Luna, Plant Operator, age 61, was seriously injured on December 9, 2010. De Luna, while standing on a 34 foot high platform, closed a six-inch waterline valve that caused a sudden increase in pressure to a two inch water hose. The hose blew off its connection striking De Luna, causing him to fall over the platform handrail to the ground.

De Luna suffered multiple serious injuries as a result of the fall and never returned to work due to the seriousness of these injuries. He was hospitalized several times, and, while in the hospital, died on July 26, 2012.

After evaluating all of the information related to accident and the death, the Chargeability Review Committee determined that this death should be charged to the mining industry. The death certificate indicated that the manner of death was accidental and was due to complications of paraplegia secondary to a fall from height.

GENERAL INFORMATION

Blue Star Materials, a surface crushed limestone facility located near Chico, Texas, was owned and operated at the time of the accident by Blue Star Materials LLC. The principal operating official was Ramero J. Jimenez, Plant Manager. Total employment was 42 persons.

At the Blue Star Materials mine, Limestone is mined on-site in an open pit quarry. The rock is transported to the crushing plant by haul truck, where the rock is crushed, screened and stock piled. The finished material is then loaded in over the road trucks. The over the road trucks haul the crushed rock to the end customers

MSHA completed the last regular inspection at this mine on May 26, 2010.

DESCRIPTION OF ACCIDENT

On December 9, 2010, Jesus De Luna, Plant Operator, Age 61, reported to work about 8:00 a.m. He started performing routine cleanup and maintenance tasks around the plant in preparation for processing material later in the day. Shortly before the accident, Mr. De Luna ascended three flights of stairs to access the West scrubber level platform, about 34 feet above ground level.

There was a six inch steel water line, providing water to the scrubber, near where De Luna was working on the platform. A one inch valve and a two-inch valve with a nipple and hose on each had been tapped into the six inch water line. A six inch butterfly valve located in the line above these two valves provided a shutoff for the scrubber.

At 9:58 a.m. De Luna abruptly closed the six inch valve. The sudden increase in pressure at the two water hoses blew both hoses off the nipples to which they were attached. The two-inch hose struck De Luna and he fell over the platform handrail. De Luna struck a cable tray then fell to the ground resulting in multiple injuries, including a broken back, several broken ribs, two punctured lungs, and shoulder damage. De Luna died from complications from his injuries on July 26, 2012.

INVESTIGATION OF ACCIDENT

MSHA was notified of the accident by a telephone call at 10:26 a.m. on December 9, 2010, from Ramero Jimenez, Plant Manager, to David Hamm, Safety Specialist, and an investigation was started the same day.

An order was issued under Section 103(j) of the Mine Act to ensure the safety of the miners. This order was subsequently modified to Section 103(k) of the Mine Act when the first Authorized Representative arrived at the mine.

MSHA's accident investigator traveled to the plant conducted 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

The accident occurred at the top platform on the west scrubber tower. The platform is provided with handrails, mid-rail, and toe boards. The victim fell over the handrail to the ground thirty-four feet below.

Equipment

The water was pumped by a 460 volt, 125 horse power, 1780 RPM Rentzel water pump. The hose was a 2" municipal grade SJ mill discharge hose with a 230 PSI service rating and a 600 PSI burst rating.

Weather

On the day of the accident, the weather was clear skies, and a temperature of 60 degrees Fahrenheit. Weather was not considered to be a factor in this accident.

TRAINING AND EXPERIENCE

Jesus De Luna had 36 years and 23 weeks of mining experience. De Luna had received the required Part 46 training.

ROOT CAUSE ANALYSIS

Root Cause: Management failed to properly attach two water hose outlets onto a six inch waterline feeding the west scrubber tower. This resulted in two water hose failures when a butterfly valve was closed on the six inch waterline. The one inch red hose and clamp blew off its fitting, and the two inch polyester jacketed hose blew into at the end of the fitting. This condition exposed miners to impact and fall injuries while adjusting the flow to the scrubber.

Corrective Action: Management replaced the hoses and reconfigured the water distribution system to the scrubber to eliminate this hazard.

CONCLUSION

This accident occurred because the 2 inch hose was used beyond the design rated capacity. The whipping action of the failed hose caused the victim to fall over the handrail of the west scrubber tower platform.

On March 27, 2015, the Chargeability Review Committee determined that this death should be charged to the mining industry. The death certificate indicated that the

manner of death was accidental and was due to complications of paraplegia secondary to a fall from height.

ENFORCEMENT ACTIONS

Issued to Blue Star Materials LLC

Order No. 8615470 – Issued on December 9, 2010, under the provisions of Section 103(j) of the Mine Act:

A non-fatal accident occurred at Blue Star Materials LLC at 10:15 on 12/09/2010. This order was issued to prevent destruction of the evidence and to prohibit all activities in the area until the area is safe.

The order was modified to a 103k order when an inspector arrived at the mine.

The order was terminated on December 13, 2010, after conditions which contributed to the accident no longer existed.

Citation No. 8615471 – Issued on December 13, 2010, under provisions of section 104(a) of the Mine Act for a violation of 30 CFR 56.14205:

Two water hoses attached to valves on the six-inch waterline on the top of the West scrubber tower failed when the six inch butterfly valve was closed. The one inch red hose and clamp blew off its fitting, and the two-inch polyester jacketed hose blew into at the end of the fitting. This condition exposed miners to impact and fall injuries while adjusting the flow to the scrubber.

The citation was terminated on December 13, 2010 after the conditions were repaired and deemed safe.

Approved: _____



Michael A. Davis
District Manager

Date: _____

9/13/15

APPENDIX A

Persons Participating in the Investigation

Blue Star Materials LLC

Ramero Jimenez	Plant Manager
Tammy Meadows	Safety Manager

Mine Safety and Health Administration

Jim DoByns	Mine Safety and Health Inspector
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APPENDIX B Victim Data Sheet

Accident Investigation Data - Victim Information

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



Event Number: 6 5 4 6 6 4 5

Victim Information: 1

1. Name of Injured/Ill Employee: <i>Jesus DeLuna</i>		2. Sex: <i>M</i>	3. Victim's Age: <i>61</i>	4. Degree of Injury: <i>01 Fatal</i>	
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: <i>07/26/2012</i> b. Time: <i>14:15</i>			6. Date and Time Started: a. Date: <i>12/09/2010</i> b. Time: <i>7:00</i>		
7. Regular Job Title: <i>145 Plant Operator</i>		8. Work Activity when Injured: <i>098 Changing water lines on crushing system</i>		9. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
10. Experience a. This Work Activity: <i>0</i> Years <i>3</i> Weeks <i>4</i> Days		b. Regular Job Title: <i>0</i> Years <i>3</i> Weeks <i>4</i> Days		c. This Mine: <i>0</i> Years <i>3</i> Weeks <i>4</i> Days	
11. What Directly Inflicted Injury or Illness? <i>117 Fell to the ground</i>		12. Nature of Injury or Illness: <i>220 Back & Shoulder broken</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: _____ None: _____					
16. Part 50 Document Control Number: (form 7000-1)			17. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>		