

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

REPORT OF INVESTIGATION

**Surface Nonmetal Mine
(Cement)**

**Fatal Fall of Person Accident
September 15, 2005**

**Texas-Lehigh Cement Plant & Quarry
Texas Lehigh Cement Company LP
Buda, Hays County, Texas
Mine I.D. No. 41-02781**

Investigators

**Brian P. Goepfert
Supervisory Mine Safety and Health Inspector**

**Kevin L. Busby
Mine Safety and Health Inspector**

**Originating Office
Mine Safety and Health Administration
South Central District
1100 Commerce Street, Room 462
Dallas, Texas 75242
Edward E. Lopez, District Manager**



Valve and hose connection point

OVERVIEW

On September 15, 2005, Jonathan G. Dowdy, welder/repairman, age 35, was fatally injured when he fell 37 feet from an inclined walkway near the feed end of a kiln. He had been standing near or on the handrail or mid-rail along the walkway, disconnecting a temporary air line located seven feet above the walking surface.

The accident occurred because safe work procedures were not utilized to protect persons working at an elevated location. The victim was working without fall protection where there was a danger of falling.

GENERAL INFORMATION

Texas-Lehigh Cement Plant & Quarry, a crushed limestone operation and cement plant, owned and operated by Texas Lehigh Cement Company LP, was located approximately two miles south of Buda, Hays County, Texas. The principal operating official was Robert Kidnew, president. The mine operated two 12-hour shifts a day, seven days per week. Total employment was 148 persons.

Limestone was drilled and blasted utilizing a multiple bench mining method. Broken rock was fed into a primary crusher and conveyed to the plant where it was mixed with other materials to produce cement. Finished products were shipped to customers by rail cars and trucks.

The last regular inspection at this operation was completed on November 23, 2004.

DESCRIPTION OF THE ACCIDENT

On September 15, 2005, Jonathan Dowdy (victim) reported for work at 5:47 a.m. His normal starting time was 7:00 a.m. but he came in early that day to check the plant waste water system, a normal job duty. Dowdy finished checking the waste water system about 8:00 a.m. when he and Michael Brown, welder/repairman, were assigned by Joe Bustamante, maintenance foreman, to finish a job they had started together earlier in the week.

Two days prior to the accident Bustamante assigned Dowdy and Brown the project of upgrading the air cannon system for the kiln. In preparation, they installed a temporary air line (2-inch outer diameter hose) to by-pass the permanent air line that supplied the air cannon. Brown, who was a few inches taller than the 6'1" Dowdy, stood on the inclined walkway near the end of the kiln to install a tee in the permanent air line. Brown added an in-line ball valve before he and Dowdy routed the hose from the ground level compressor station to the newly installed valve. Brown stood on the walkway and connected the hose using a quick coupling and safety pins. Both Dowdy and Brown were then assigned to other tasks until the day of the accident.

Upon resumption of the air cannon upgrade, Dowdy and Brown used the temporary air line while performing some work on the permanent air line. They finished about 9:30 a.m. and briefly discussed what to do next. They agreed to close the valve at the elevated end of the hose, bleed the pressure off the hose, and disconnect the compressor end of the hose. Dowdy and Brown decided to leave the elevated end of the hose connected in case they needed it later.

Dowdy went to the inclined walkway to close the valve between the permanent air line and the hose and arrived there about 9:35 a.m. Dowdy closed the valve and signaled to Brown that he had done so. Brown could see, from his vantage point at ground level, that the valve handle was in the 'OFF' position and that the elevated end of the hose was still attached.

Brown then walked to the air compressor station which was a few feet away and out-of-sight from the inclined walkway. He opened the valve to the permanent air line and closed the valve to the hose. Moises Ramirez, production helper, came by and assisted Brown in bleeding the pressure from the hose and removing it from the compressor connection.

About 9:41 a.m., Ramirez left the air compressor station to check a dust dumpster that was located at ground level below the inclined walkway where Dowdy had been standing. Ramirez found Dowdy, lying on his left side next to the dumpster. Dowdy was not wearing fall protection and fell from the walkway, hit the west edge of the dust dumpster, and landed on the concrete floor next to the dumpster.

Ramirez called for help and several employees came to the scene. Dowdy was given cardiopulmonary resuscitation until local emergency medical personnel arrived. He was pronounced dead at the scene by the Justice of the Peace. Death was attributed to blunt force trauma.

INVESTIGATION OF THE ACCIDENT

MSHA was notified of the accident at 10:02 a.m. on September 15, 2005, by a telephone call from Scott Garraway, safety and training director, to Ralph Rodriguez, supervisory mine safety and health inspector. An investigation was started that day. An order was issued under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners. 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 on an inclined walkway near the kiln in the plant. The plant was roofed and open to the outside. The weather was clear skies with a temperature of approximately 82 degrees Fahrenheit.

Inclined walkway

The inclined walkway was parallel to the east side of the kiln, between pier 3 and the feed end. The walkway was 20.5 feet long, 47 inches wide, and rose 6 feet from the kiln feed to pier 3 at a 29.3% slope. The walkway ranged from 31 feet to 37 feet above the concrete floor at ground level. The walkway surface was clean, constructed of solid anti-skid metal, structurally sound, and had adequate traction.

The walkway was equipped on each side with 1.5-inch (inner diameter) tubular metal mid-rails and handrails. The mid-rails were 24 inches high and the handrails were 41 inches high, both measured from the walking surface.

Air Supply System

Compressed air was supplied to the air cannon system from an Atlas Copco Model GA30 air compressor located on the ground level of the plant. The compressor also supplied air to several dryers, air receivers, valves, and rigid pipes. The compressed air system was checked and found to be in working condition. Normal operating pressure for the system was 115 pounds per square inch and no pressure buildup was detected.

The permanent main air line consisted of 2-inch schedule 40 metal piping and was routed from the air compressor station on the ground level to the south end of the inclined walkway near the feed end of the kiln, just outside the west handrail. There were three ball valves installed in this area. The valves were inspected and found to be without defects.

The first ball valve served the upper air cannons and was located 7.25 feet above the walking surface and 1 foot from the south end of the walkway. This valve was in the 'OFF' position. A lock and out-of-service tag had been installed on this valve prior to the accident because of an unrelated maintenance project.

The second valve served the automatic greasing system for the kiln drive gear and was located 6 feet above the walking surface. This valve was in the 'ON' position but was unrelated to the accident.

The third valve was a Dixon in-line ball valve that had been installed by Brown only two days before the accident. It connected to the main line through a pipe tee and had a 4-lug Air King end (quick coupling) on the other side to accommodate an air hose similarly equipped. The valve was 6.75 feet above the walking surface and 2 feet from the south

end of the walkway. The Air King end was 7 feet above the walking surface and 3 feet from the south end of the walkway.

Temporary air line

The temporary air line consisted of two 45-50 foot long, 1.5-inch (inner diameter) flexible rubber hoses that were connected end to end. All hose ends were equipped with 4-lug Air King ends (quick couplings) that were secured with safety pins. The hose was routed from the ground level air compressor station, up to the north end of the inclined walkway, then outside the west side of the walkway to the recently installed valve and tee from the permanent air line. The air hose had been disconnected at the coupling and was hanging over the handrail, at the west side of the walkway, above where Dowdy was found.

Training and Experience

Jonathan G. Dowdy had seven and a half years of mining experience and had received training in accordance with 30 CFR, Part 46.

ROOT CAUSE ANALYSIS

A root cause analysis was conducted and the following causal factors were identified:

Causal Factor: Administrative controls needed improvement in that a risk assessment was not conducted prior to installing the air valve for the temporary air line seven feet above the walkway, equipped with hand rails, that was inclined at a 29 degree slope. The victim may not have recognized the hazard associated with reaching above the hand rails to uncouple the air hose. The victim was working where there was a danger of falling and was not secured by a safety belt and line.

Corrective Action: Conduct a risk assessment to identify all potential hazards and ensure valves and controls are positioned where persons operating them are not exposed to hazards.

Thoroughly train employees in safe job procedures and hazard recognition before any work begins.

CONCLUSION

The accident occurred because safe work procedures were not utilized to protect persons working while positioned at an elevated location. The victim was working where there was a danger of falling and was not secured by a safety belt and line.

A risk assessment to identify all possible hazards and establish safe procedures had not been conducted by management or the worker prior to performing this task.

ENFORCEMENT ACTIONS

Order No. 6261405 was issued on September 15, 2005, under provisions of Section 103(k) of the Mine Act:

A fatal accident occurred at this operation on September 15, 2005, when a miner fell approximately 37 feet in the area by the east side of the kiln feed, near the 534B motor. This order is issued to assure the safety of persons at this operation and prohibits any work in the affected area until MSHA determines that it is safe to resume normal operations in the area. The mine operator shall obtain prior approval from an Authorized Representative for all actions to recover and/or restore operations to the affected area.

The order was terminated on September 19, 2005. Conditions that may have contributed to the accident have been corrected and normal mining operations can resume.

Citation No. 6261406 was issued on September 29, 2005, under the provisions of Section 104(a) of the Mine Act for violation of 30 CFR 56.15005:

On September 15, 2005, a fatal accident occurred at this mine site when a welder repairman fell approximately 37 feet from the second level to the ground, near the feed end of the kiln. The victim was working where there was a danger of falling and was not secured by a safety belt and line.

This citation was terminated on October 13, 2005. The mine operator initiated an ongoing program to identify and eliminate hazardous conditions.

Approved: _____

Edward E. Lopez
District Manager

Date: _____

APPENDIX A

Persons Participating in the Investigation

Texas Lehigh Cement Company LP

Dan Anderson	director of maintenance and engineering
Jeter (J. D.) Barron	electrical maintenance supervisor
Joe Bustamante	maintenance foreman
Scott Garraway	safety and training director
Robert Kidnew	president
Donald Killebrew	plant manager
John Lambeck	maintenance foreman

Mine Safety and Health Administration

Brian P. Goepfert	supervisory mine safety and health inspector
Kevin L. Busby	mine safety and health inspector