

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

REPORT OF INVESTIGATION

**Surface Non-Metal Mill
(Lime)**

**Fatal Machinery Accident
June 13, 2007**

**Irondale Industrial Contractors Inc.
Contractor ID No. 7NM
at
Peerless Mine
Mississippi Lime Company
Ste. Genevieve, Ste. Genevieve County, Missouri
Mine ID No. 23-00542**

Investigators

**Frederick B. Moore
Supervisory Mine Safety and Health Inspector**

**Allen R. Govero
Mine Safety and Health Inspector**

**Originating Office
Mine Safety and Health Administration
South Central District
1100 Commerce Street, Room 462
Dallas, TX 75242-0499
Edward E. Lopez, District Manager**

OVERVIEW

On June 13, 2007, Skeets Myrick, contractor welder, age 45, was injured when a suspended section of 42-inch diameter pipe shifted abruptly and struck him. Myrick was hospitalized and died of his injuries on June 19, 2007.

The accident occurred because the contractor's policies and work procedures failed to ensure that all persons stayed clear of suspended loads. A means of communication had not been established to ensure that all persons were aware of actions being taken to align the pipe.

GENERAL INFORMATION

Peerless Mine, an underground mine and surface mill, owned and operated by Mississippi Lime Company, was located in Ste. Genevieve, Ste. Genevieve County, Missouri. The principal operating official was Keith E. Espelien, vice-president. The mine and mill operated 3 shifts, 24 hours a day, 7 days per week. Total employment was 560 persons.

Limestone was drilled and blasted underground. Broken rock was moved by trucks to an underground primary crusher. Crushed rock was transported by conveyor belts to the surface, where it was processed in the mill. Lime and calcium-based products were shipped and sold to commercial industries.

Irondale Industrial Contractors Inc. (Irondale), located in Birmingham, Alabama, was a construction contractor. The principal operating official was John Kosie, Chief Executive Officer. At the time of the accident, Irondale was replacing a large pipe at the twin shaft kiln (TSK) building at the mine.

The last regular inspection at this operation was completed on May 23, 2007.

DESCRIPTION OF ACCIDENT

On the day of the accident, Skeets Myrick (victim), reported for work at 6:50 a.m. and attended a safety meeting at 7:00 a.m., his normal starting time. After the meeting, Richard McCloskey, foreman, directed Myrick, David Dailey, Steve Green, and Kenny Green, welders, to perform several tasks in preparation for installing a 42-inch diameter duct pipe through the outside wall of the TSK building. This end of the pipe was oriented at 90 degrees to adjoin a flange on the side of a reversal box located on the eighth floor, just inside the outer wall of the building.

Work progressed normally until about 2:15 p.m., when Myrick's co-workers were ready to place the 90-degree end of the duct pipe through the wall of the building.

Lynn Roach, crane operator, lifted the section of pipe, which was rigged to keep it vertical during the lift. Steve Green and Kenny Green were standing on the outside walkway at the eighth floor level of the TSK building. Myrick was positioned near the left side of the reversal box, inside the building. Jason Conner, welder, and Dailey were in a man-lift about midway between ground level and the eighth floor of the building, signaling Roach and manning a tag-line to guide the lower end of the duct pipe into place.

About 3:25 p.m., Conner and Dailey attached a 1.5-ton come-a-long to the lower end of the duct pipe so they could try to pull it to the right. Steve Green and Kenny Green were preparing to attach a 1.5-ton come-a-long between the upper end of the duct pipe and the walkway handrail, attempting to align the 90-degree end of the duct pipe through the hole in the building.

Steve Green passed the hook of the second come-a-long through the hole in the wall of the building so Myrick could attach it to the lip of the duct pipe. Jaime Maldonado, foreman, who was installing insulation near the reversal box, saw Myrick walk from the left side of the hole toward the right side of the hole. About that time, Dailey noticed that the duct pipe was resting against two welding cables that

extended from the ground to the eighth floor handrail where they were tied off. Dailey offered to pull the duct pipe off the cables as McCloskey, who was on the ground, pulled the cables free. As the duct pipe was moved, it shifted and the 90-degree end went through the hole, striking Myrick in the head.

Maldonado saw the end of the duct pipe strike Myrick and told Steve Green and Kenny Green. Steve Green notified McCloskey, who called Danny Pennington, site manager. Pennington called for emergency medical services (EMS). EMS arrived at the plant at 3:42 p.m. and treated Myrick until air transportation arrived to transport him to a hospital in St. Louis. Myrick was hospitalized and died on June 19, 2007. The cause of death was listed as blunt force trauma.

INVESTIGATION OF ACCIDENT

On the day of the accident, MSHA was notified at 3:59 p.m., by a telephone call from Jeffrey Gurley, safety supervisor, to MSHA's emergency hotline. Fred Gatewood, assistant district manager, was notified and an investigation was started the next day. An order was issued pursuant to section 103(k) of the Mine Act to ensure the safety of 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 and contractor management, mine and contractor employees, and the miners' representative.

DISCUSSION

Location of Accident

The accident occurred on the eighth floor of the TSK building. The weather was warm and dry and was not considered to be a factor in the accident.

Duct Pipe

Duct pipe situated on the outside of the TSK building routed kiln waste gases from the reversal box on the eighth floor to the bag house on the main level. Irondale had removed the old duct pipe and was placing new duct pipe at the time of the accident. The section of duct pipe involved in the accident was fabricated from 42-inch diameter steel pipe with a wall thickness of 3/8 inches. It consisted of a 16-foot pipe welded to a 34-foot pipe at a 45-degree angle and a 90-degree elbow welded to the other end of the 34-foot pipe. The 90-degree end of the section of duct pipe was supposed to adjoin a flange on the side of a reversal box located on the eighth floor, just inside the outside wall of the building. The section of duct pipe, consisting of two pieces of pipe and an elbow, weighed an estimated 10,000 pounds.

Crane & Rigging

The crane involved in the accident was a 130-ton Link-Belt All-Terrain model ATC-3130. The rigging consisted of a 4-leg sling, a 1-inch choker, and a Harrington model # LB030 3-ton come-a-long. Each leg of the sling consisted of 15-foot long, 3/4-inch steel cable. The legs were attached to a common 1-inch shackle and the other ends attached to lifting points located at the 135-degree turn on the duct pipe.

A 3-ton come-a-long was attached to one leg of the sling for load adjustment. A guy line made of 1/2-inch diameter nylon rope was attached near the bottom of the duct.

Man-lift

The man-lift being utilized was a JLG 120-foot model 1200SJP. It was located about midway between ground level and the eighth floor of the TSK building. The man-lift was being used to provide access to the duct pipe while it was suspended in the air. At the time of the accident, two employees were in the man-lift, manning a tag-line attached to the duct pipe and giving signals to the crane operator.

Training and Experience

Skeets Myrick had 4 years mining experience, all with Irondale. He had worked 10 days at this operation. David Dailey had 8 years mining experience, all with Irondale, and 2 years at this operation. Steve Green had 2 years and 7 weeks mining experience, all with Irondale at this operation. Kenny Green had 3 years and 7 weeks mining experience, including 18 weeks with Irondale at this operation. Lynn Roach had 26 weeks mining experience, all with Irondale, 7 years as a crane operator, and 2 weeks at this operation. Jason Conner had 2 years and 38 weeks mining experience, all with Irondale at this operation. Each of them had received training in accordance with 30 CFR, Part 48.

ROOT CAUSE ANALYSIS

A root cause analysis was conducted and the following root cause was identified:

Root Cause: The policies and procedures of the contractor were inadequate. They did not ensure that persons stayed clear of suspended loads while installing the pipe. No means of communication was established for all persons performing the task.

Corrective Action: The policies and procedures of the contractor should include conducting a risk assessment before performing potentially hazardous tasks. Hazards should be identified and safe work procedures discussed with all crew members. The procedures should ensure all persons are provided with a means to communicate with each other.

CONCLUSION

The accident occurred because the contractor's policies and work procedures failed to ensure that all persons stayed clear of suspended loads. A means of communication had not been established to ensure that all persons were aware of actions being taken to align the pipe.

ENFORCEMENT ACTIONS

Mississippi Lime Company

Order No. 6262293 was issued on June 13, 2007, under the provisions of Section 103(k) of the Mine Act:

A serious accident occurred at this operation on June 13, 2007, when one miner was attempting to position a 42-inch steel duct. The miner was struck in the head by the duct when it unexpectedly moved. This order is to ensure the safety of all personnel at this operation. It prohibits all activity on the top floor (8th) of the Maerz twin shaft kiln until MSHA has determined that it is safe to resume normal operations. The mine operator shall obtain prior approval from an authorized representative for all actions before restoring activity in this area.

This order was terminated on Jun 15, 2007, after conditions that contributed to the accident had been corrected.

Irondale Industrial Contractors Inc.

Citation No. 6240117 was issued to Irondale Contracting Inc. on June 15, 2007, under the provisions of Section 104(a) of the Mine Act for a violation of 30 CFR, 56.16009:

A serious accident resulting in a fatality occurred at this operation on June 13, 2007, when a contract miner did not stay clear of a suspended load. The miner was allowed to remain in the path of the suspended 42-inch steel duct that was being installed in the TSK building. The duct shifted and struck the victim in the head.

This citation was terminated on June 15, 2007. The foremen conducted a walk through with persons to identify hazards involved in working around suspended loads. A Job Safety Analysis was developed for the task, stressing the need for proper communications.

Approved:_____

Edward E. Lopez
District Manager

Date:_____

APPENDIX A

Person Participating in the Investigation

Peerless Mine

Richard L. Donovan	safety and health manager
Jeffrey Gurley	safety supervisor
Michael D. Sheffield	plant manager, specialty products

Irondale Contracting Inc.

Billy W. Goza	safety director
Kenny Johnson	superintendent
Danny R. Pennington	site manager

Mine Safety and Health Administration

Frederick B. Moore	supervisory mine safety and health inspector
Allen P. Govero	mine safety and health inspector

APPENDIX B

Accident Investigation Data - Victim Information

U.S. Department of Labor

Mine Safety and Health Administration



Event Number: 1 0 4 8 2 3 5

Victim Information: 1										
1. Name of Injured/Ill Employee: <i>Skeets W. Myrick</i>			2. Sex: <i>M</i>		3. Victim's Age: <i>45</i>		4. Last Four Digits of SSN:		5. Degree of Injury: <i>01 Fatal</i>	
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 06/19/2007 b. Time: 11:40</i>							7. Date and Time Started: <i>a. Date: 06/13/2007 b. Time: 7:00</i>			
8. Regular Job Title: <i>021 Welder/pipe fitter</i>					9. Work Activity when Injured: <i>088 Helping position pipe</i>				10. Was this work activity part of regular job? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
11. Experience a. This Work Activity: <i>4 0 0</i>			b. Regular Job Title: <i>4 0 0</i>			c. This Mine: <i>0 2 0</i>			d. Total Mining: <i>4 0 0</i>	
12. What Directly Inflicted Injury or Illness? <i>088 42-inch diameter metal pipe</i>							13. Nature of Injury or Illness: <i>140 Concussion to the head</i>			
14. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>										
15. Company of Employment: (If different from production operator) <i>Irondale Contracting Inc.</i> Independent Contractor ID: (if applicable) <i>7NM</i>										
16. On-site Emergency Medical Treatment: Not Applicable: <input type="checkbox"/> First-Aid: <input checked="" type="checkbox"/> CPR: <input checked="" type="checkbox"/> EMT: <input checked="" type="checkbox"/> Medical Professional: <input type="checkbox"/> None: <input type="checkbox"/>										
17. Part 50 Document Control Number: (form 7000-1)							18. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>			

Victim Information:										
1. Name of Injured/Ill Employee:			2. Sex:		3. Victim's Age:		4. Last Four Digits of SSN:		5. Degree of Injury:	
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:							7. Date and Time Started:			
8. Regular Job Title:					9. Work Activity when Injured:				10. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>	
11. Experience: a. This Work Activity:			b. Regular Job Title:			c. This Mine:			d. Total Mining:	
12. What Directly Inflicted Injury or Illness?							13. Nature of Injury or Illness:			
14. Training Deficiencies: Hazard: <input type="checkbox"/> New/Newly-Employed Experienced Miner: <input type="checkbox"/> Annual: <input type="checkbox"/> Task: <input type="checkbox"/>										
15. Company of Employment: (If different from production operator) Independent Contractor ID: (if applicable)										
16. On-site Emergency Medical Treatment: Not Applicable: <input type="checkbox"/> First-Aid: <input type="checkbox"/> CPR: <input type="checkbox"/> EMT: <input type="checkbox"/> Medical Professional: <input type="checkbox"/> None: <input type="checkbox"/>										
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8. Regular Job Title:					9. Work Activity when Injured:				10. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>	
11. Experience: a. This Work Activity:			b. Regular Job Title:			c. This Mine:			d. Total Mining:	
12. What Directly Inflicted Injury or Illness?							13. Nature of Injury or Illness:			
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