MAI-2009-18

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

REPORT OF INVESTIGATION

Underground Nonmetal Mine
(Crushed and Broken Limestone)

Fatal Fall of Person Accident
October 19, 2009

Sterling Materials
Sterling Materials
Verona, Gallatin County, Kentucky
Mine ID No. 15-18068

Investigators

Stanley K. Stevenson
Supervisory Mine Safety and Health Inspector

Ed L. Jewell
Mine Safety and Health Inspector

Jorge L. Rivera
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Southeast District
135 Gemini Circle, Suite 212, Birmingham, Alabama 35209
Michael A. Davis, District Manager

OVERVIEW

Melvin Jones, Plant Miner, age 58, was injured on October 19, 2009, when he fell from belt conveyor 29 located between building #2 and #3 at the secondary plant. He climbed onto the belt conveyor, below the top take-up pulleys, to trim a piece of loose belt on the left side of the elevated conveyor when he fell 19 feet 8 inches to the ground below. Jones was permanently disabled and died on January 11, 2011.

The accident occurred due to management's failure to ensure that Jones wore fall protection where there was a danger of falling. The Mine Safety and Health Administration (MSHA) conducted a thorough investigation when this accident occurred. Following the victim's death on January 11, 2011, MSHA conducted a follow-up investigation to determine chargeability.

Information was forwarded to MSHA's Fatality Review Committee (Committee) to determine if this death was chargeable as a mine-related fatality. Based on the results of MSHA's investigation and a review of the available medical documentation, the Committee determined on December 10, 2012, that Jones' death should be charged to the mining industry.

The death certificate indicated Jones' death was natural and that the immediate cause of death was pneumonia due to chronic respiratory failure due to paraplegia. An autopsy was not performed. The Committee concluded that his death would likely not have occurred had he not sustained life-threatening injuries from a work related fall on October 19, 2009.

GENERAL INFORMATION

Sterling Materials is a multi-level, underground limestone mine owned and operated by Sterling Materials. The mine is located in Verona, Gallatin County, Kentucky. The principal operating official is Sam Van, General Manager. The mine normally operates one shift 10 hours per day, 4 days per week. Total employment is 35 persons.

Limestone is extracted using the room and pillar mining method. The material is blasted from the headings and front-end loaders are used to load the blasted material into haul trucks. The haul trucks carry the material to a primary crusher located underground. The crushed limestone is transported by belt conveyors to a lime plant adjacent to the site or to the secondary plant on the mine site for further processing. Finished materials are sold for various uses in the construction industry.

Prior to the accident, MSHA completed the last regular inspection of this operation on July 15, 2009.

DESCRIPTION OF THE ACCIDENT

On the day of the accident, Melvin Jones (victim) reported to work at 5:00 a.m., his normal starting time. He met Jason Adams, General Labor-Plant, at the control tower clock and clocked in. Jones told Adams his service truck had a flat tire. They walked to another building to get the Foreman's pickup truck. They traveled to the barn to obtain oil for the equipment and went to building #1 to service the screen at the top of the building. They then serviced the screen at the top of building #3.

When they went to leave, the pickup truck would not start. Jones told Adams to get Vyron Chadwell, Plant Miner, to move the truck to the barn for repairs. Jones remained in the plant area**.** About 6:00 a.m., Ralph Jewell, Plant Control Room Operator, radioed to ask Jones if he was ready to start the plant. Jones told him to start the plant.

About 6:15 a.m., Jones radioed Jewell to shut down belt conveyor 29. Jones then trimmed off a piece of loose belt and radioed Jewell that conveyor 29 was clear to start. Moments later, R. L. Maxwell, Plant Superintendent, found Jones lying on the ground below belt conveyor 29. There were no witnesses to the accident.

At 6:33 a.m., David Towles, Scale House Operator, called Emergency Medical Services (EMS). Barry Alexander, EMS, arrived at 6:47 a.m., checked Jones, and requested Air Flight services. An ambulance transported Jones to the mine entrance road where Air Flight transferred him to the University of Cincinnati Hospital.

INVESTIGATION OF THE ACCIDENT

MSHA was notified of the accident at 7:07 a.m., on October 19, 2009, by a telephone call from Chris Pulliam, Mine Superintendent, to the National Call Center. The Call Center notified Doniece Schlick, Safety Specialist, and an investigation was started. A 30 CFR Part 50.10 citation (immediate notification) was issued. The mine operator was also issued a 30 CFR Part 50.12 citation for failure to preserve the accident scene because the plant was re-started between 7:30 a.m. and 8:00 a.m.

MSHA's accident investigation team traveled to the mine and 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, Gallatin County 911, and the University of Cincinnati Hospital.

MSHA was notified of Jones' death at 11:30 a.m. on January 11, 2011, by a telephone call from Penny Van, Office Manager, to Mitch Adams, Supervisory Mine Safety and Health Inspector, Lexington Field Office. A follow-up chargeability investigation began on January 12, 2011.

DISCUSSION

Location of the Accident

The accident occurred at belt conveyor 29 located between building #2 and #3 at the secondary plant. The lighting in this area was inspected and found to be sufficient to provide safe working conditions.

Based on interviews, investigators determined the victim climbed onto belt conveyor 29 just below the top take-up pulleys. A 6-foot long piece of belting was found under the victim and a knife/blade was found near him. Jones' cap light was found attached to the structure on the left side of the conveyor below the take-up pulleys. The victim was not wearing a safety belt and line.

Materials and Equipment
Belt conveyor 29 had a 48-inch belt and a walkway along the right side about 26 inches wide with a 42-inch high handrail from the elevated platform. The belt was torn on the left side. The conveyor structure was 52 inches wide with 35 degree idlers on the top. The height from the top of the belt conveyor to ground level was 19 feet 8 inches.

The belt conveyor had an emergency stop device along the right side. Statements from miners interviewed indicated the device was activated when the victim was found. The device was inspected and found to be functional. The alarm on the plant including belt conveyor 29 was inspected and found to be defective. A non-contributory citation was issued. The start-up warning system for the secondary plant was defective and a non-contributory citation was issued.

Personal Protective Equipment
Fall protection was available to persons at the mine site. However, investigators did not find any fall protection at the location of the accident. Written policies or procedures were not established by management regarding the use of fall protection. Based on interviews, the investigators determined there was a practice at the plant of persons climbing onto the belt conveyor where there was a danger of falling without wearing fall protection.

Weather
The temperature on the day of the accident was 32 degrees Fahrenheit and wind speeds of 9 mph. Miners interviewed stated during similar weather conditions, belt conveyor 29 had heavy frost on it. If belt conveyor 29 had frost on it on the day of the accident, the belt conveyor would have been slick.

Training and Experience
Melvin Jones had 5 years and 20 weeks of mining experience, all at this mine. An in-depth review of the victim's training records was conducted and the training records found to be in compliance with MSHA training requirements.

ROOT CAUSE ANALYSIS

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

Root Cause: Management did not establish safe procedures for when to wear fall protection nor ensure that persons followed procedures to wear fall protection where a potential falling hazard existed. The victim was not wearing fall protection where there was a danger of falling while working on a belt conveyor.

Corrective Action: Management established procedures to ensure persons wear fall protection where a potential falling hazard exists. Static lines were installed on both sides of the belt conveyor where walkways are provided. When working on this belt conveyor, all persons are now required to wear fall protection with double lanyards and be tied off to static lines at all times. All persons were trained in these new procedures.

CONCLUSION

The accident occurred due to management's failure to ensure that Jones wore fall protection where there was a danger of falling. Based on interviews, the investigators determined there was a practice of persons climbing onto the belt conveyor where there was a danger of falling without wearing fall protection.

ENFORCEMENT ACTIONS

Issued to Sterling Materials

Citation 6098258 -- issued under the provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 57.15005:

> *On 10/19/2009 at about 6:20 -6:25 am, a miner fell from Conveyor Belt 29 located between building #2 and #3 at the secondary plant. The miner was not wearing a safety belt and line. He climbed onto the 48 inch wide conveyor belt just below the top take-up pulleys to cut a piece of loose belting on the left side of the elevated conveyor. The miner fell 19 feet 8 inches to the ground below. The practice was being performed by several other miners at the plant. The citation was terminated on November 2, 2009 after the operator conducted classes and reinstructed all employees on the proper use of fall protection while working from elevated positions. Also, the mine operator installed static lines on both sides of Conveyor 29 to which safe access is provided and purchased fall protection with double lanyards to be used on Conveyor 29, in which 100 percent tie off can be provided when fastening to the static lines.*

Approved: Samuel K Pierce For Date: 2/26/13

Michael A. Davis
District Manager

APPENDICES

APPENDIX A: Persons Participating in the Investigation

APPENDIX B: Victim Information

APPENDIX A

Persons Participating in the Investigation

Sterling Materials

Sam Van	General Manager
Chris Pulliam	Mine Superintendent
R. L. Maxwell	Plant Superintendent

Gallatin County 911 - Warsaw EMS

Chris Curtis	911 Coordinator
Kenny Locke	EMT
Barry Alexander	EMT

Mine Safety and Health Administration

Stanley K, Stevenson	Supervisory Mine Safety and Health Inspector
Ed L. Jewell	Mine Safety and Health Inspector
Jorge L. Rivera	Mine Safety and Health Inspector
Thomas O. Galbreath	Mine Safety and Health Inspector

APPENDIX B

Accident Investigation Data - Victim Information

Event Number: 6 5 2 5 3 1 7

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:
Melvin Jones	*M*	*58*	*01 Fatal*

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 01/11/2011 b.Time: 5:05	*a. Date: 10/19/2009 b.Time: 5:00*

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
004 Maintenance	*013 climbing on elevated belt conveyor*	Yes X No

10. Experience	Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days
a. This Work Activity:	5	20	0	b. Regular Job Title:	5	20	0	c. This Mine:	5	20	0	d. Total Mining:	5	20	0

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
027 ice on belt victim slipped and fell	*370 Perment disabled until death*

13. Training Deficiencies:

Hazard: X 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: X Medical Professional: None:

16. Part 50 Document Control Number: (form 7000-1) *220093010016* 17. Union Affiliation of Victim: *9999 None (No Union Affiliation)*