MAI-2011-10

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

REPORT OF INVESTIGATION

Surface Nonmetal Mine
(Sand and Gravel)

Fatal Slip/ Fall of Person Accident
September 23, 2011

Freedom Pit
Lafarge North America, Inc.
Delevan, Cattaraugus County, New York
MSHA I.D. No. 30-01582

Investigators

Thomas J. Shilling
Mine Safety & Health Inspector

Kenneth J. Chamberlain
Mine Safety and Health Specialist

Originating Office

Mine Safety and Health Administration
Northeast District
178 Thorn Hill Road, Suite, 100
Warrendale, Pennsylvania 15086-7573
Donald J. Foster, Northeast District Manager

OVERVIEW

On September 23, 2011, John P. Collingwood, plant operator, age 32, was killed when he fell from a screen deck work platform 56 feet to the ground below. He was standing on two steel clamping bars that had been placed between the midrail of the protective rail surrounding the screen deck work platform and the screen structure to create a step. Collingwood stood on the step to reposition a screen. He was positioned above the confines of the protective railing when he slipped and fell.

The accident occurred because management policies, procedures, and controls did not ensure that persons could safely perform maintenance on the secondary screen tower. Routine maintenance required that the screens be replaced periodically. The height of the opening for the screen being replaced was 64 inches from the work platform, making it difficult for persons to gain the leverage necessary to safely remove the screen. No procedures had been established to ensure that persons could safely reach the elevated screen from the provided work platform. To gain the needed leverage on the screen, the victim had to be positioned above the protective railing on the screen deck work platform. He was not wearing a safety belt and line where there was a danger of falling. The victim's fall protection was attached to a man lift that had been used earlier to lift the screens to the elevated platform.

GENERAL INFORMATION

Freedom Pit, an open pit sand and gravel mine, owned and operated by Lafarge North America, Inc. is located near Delevan, Cattaraugus County, New York. The principal operating official is Gregory S. Owens, plant manager. The mine normally operates one 8-hour shift per day, 5 days a week. Total employment is six persons.

Material is mined in the pit with a front-end loader that digs directly into a bank. The material is placed into a primary grizzly at the pit and then transported via belt conveyor to the plant where it is sized, screened, and washed. Finished materials are sold for construction aggregate.

The last regular inspection of this operation was completed on May 24, 2011.

DESCRIPTION OF ACCIDENT

On the day of the accident, John P. Collingwood, (victim) reported to work at 7:00 a.m., his normal start time. Gary W. Barber, superintendent, assigned duties to John C. Prutsman, plant operator, Doug J. Preston, plant operator, and Collingwood. Barber told them to change screens on the secondary screen located on the secondary screen tower. The crew was to work until 1:00 p.m. when a luncheon was to be served to commemorate 13 years of no lost time accidents at the mine.

Collingwood, Prutsman, and Preston locked and tagged out the screen and got a man lift to place the new screens into the work area. At 7:30 a.m., William M. Law, laboratory technician, arrived and began helping the other crew members change the screens.

Law entered the bottom screen by going through the opening at the rear lower area of the screen housing. Prutsman entered the screen housing middle deck. Prutsman and Law removed the bolts holding the screens in place. After all the fasteners were removed, the crew removed the three screens that needed replaced.

Collingwood and Preston assisted in the removal of the screens from outside of the screen. They attempted to place the first screen into the middle deck while Prutsman and Law were on the inside of the screen housing. Shortly before 8:00 a.m., the screen became wedged on a water spray bar. To provide additional height and leverage to assist with the installation of the screen, Collingwood placed two steel clamping bars from the midrail of the protective railing to the back plate of the screen deck housing. These two steel clamping bars were each approximately 2 ½ inches wide.

Collingwood stepped up onto the bars and was attempting to pull the screen out when he slipped backwards over the top of the handrail. Preston caught Collingwood's leg as he fell but was unable to hold him. He screamed to the others that Collingwood had fallen. Prutsman and Law exited the screen and saw Collingwood on the ground.

About 8:00 a.m., Preston called for help on the radio. Barber responded, went to the scene, and contacted Gregory S. Owens, plant manager, to call for Emergency Medical Services (EMS). Barber checked Collingwood but he was nonresponsive. Barber and Prutsman provided Cardiopulmonary Resuscitation (CPR) until EMS arrived at 8:23 a.m. Collingwood was transported to a local hospital where the attending physician pronounced him dead at 9:03 a.m. The cause of death was attributed to multiple blunt force traumas.

INVESTIGATION OF THE ACCIDENT

On September 23, 2011, the Mine Safety and Health Administration, (MSHA) was notified of the accident at 8:41 a.m. by the National Call Center. Kevin H. Abel, safety specialist, was then informed of the accident. An investigation was started the same day. In order to ensure the safety of all persons, an order was issued pursuant to 103(j) of the Mine Act. This order was later modified to section 103(k) of the Mine Act when the first Authorized Representative arrived at the mine. A Part 50 citation was issued for untimely reporting.

MSHA's accident investigation team traveled to the mine, conducted a physical inspection of the accident site, interviewed employees, and reviewed conditions 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 secondary screen tower area.

Weather

The weather consisted of cloudy skies with a temperature of approximately 58 degrees Fahrenheit and was not considered to be a factor in the accident.

Equipment Involved

The screen involved in the accident is a Seco Screen Type F, model no. 3620. The screen box is 6 feet wide by 20 feet long. It contains three screens that separate previously crushed and screened material according to the size of the material.

The screen is surrounded on three sides by a 45-inch wide work platform. The protective rail surrounding the screen deck work platform has a 37-inch high top rail and an 18-inch high midrail.

Training and Experience

John P. Collingwood (victim) had 10 years and 5 months of experience, 10 years at this mine. Doug J. Preston had 5 years and 4 months of experience at this mine. William M. Law had 10 years and 3 months of experience at this mine. Gary W. Barber and John C. Prutsman each had more than 10 years of experience at this mine.

A representative of MSHA's Educational Field Services conducted an in-depth review of the mine operator's training records. The training records for the victim and the crew working with him were examined and found to be in compliance and up-to-date with MSHA training requirements.

The mine operator established a written Job Safety Analysis (JSA) for the task of changing screens and trained all persons regarding these safe procedures. The mine operator also trained all persons in the use of fall protection where there is a danger of falling.

Root Cause Analysis

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

Root Cause: The accident occurred because management policies, procedures, and controls did not ensure that persons could safely perform maintenance on the secondary screen tower. The victim was having difficulty gaining the leverage necessary to remove the screen. To gain the needed leverage on the screen, he had to be positioned above the protective railing on the screen deck work platform. He was positioned above the protective railing on the screen deck work platform and was not wearing a safety belt and line where there was a danger of falling. .

Corrective Action: Management established a written Job Safety Analysis (JSA) for the task of changing screens and trained all persons regarding these safe procedures. The mine operator also trained all persons in the use of fall protection where there is a danger of falling.

CONCLUSION

The accident occurred because management policies, procedures, and controls did not ensure that persons could safely perform maintenance on the secondary screen tower. Routine maintenance required that the screens be replaced periodically. The height of the opening for the screen being replaced was 64 inches from the work platform, making it difficult for persons to gain the leverage necessary to safely remove the screen. No procedures had been established to ensure that persons could safely reach the elevated screen from the provided work platform. To gain the needed leverage on the screen, the victim had to be positioned above the protective railing on the screen deck work platform. He was not wearing a safety belt and line where there was a danger of falling. The victim's fall protection was attached to a man lift that had been used earlier to lift the screens to the elevated platform.

ENFORCEMENT ACTIONS

Issued to Lafarge North America, Inc

Order No. 8647267 was issued on September 23, 2011, under the provisions of Section 103(j) of the Mine Act:

A fatal accident occurred on September 23, 2011 at the Mill/Prep Plant. A verbal 103 J order is issued prohibiting all persons from entering the area with the exception of Rescue personnel and investigators. The order was issued by Kevin Abel to William Law at 9:05 a.m. The order is issued to assure the safety of persons at this operation and prohibits any work in the affected area.

This order was modified to section 103(k) of the Mine Act when the first Authorized Representative arrived at the mine site.

This order was terminated on September 27, 2011, after conditions that contributed to the accident no longer existed.

Citation No. 8647277 was issued on October 24, 2011, under provisions of 104(a) of the Mine Act for a violation of 30 CFR 56.15005:

A fatal accident occurred at this operation on September 23, 2011, when an employee fell approximately 56 feet. The victim was performing maintenance work from a screen deck platform where there was a danger of falling. He was not wearing a safety belt and line while the work was being performed.

This citation is a "Rules to Live By" priority standard and was terminated on October 25, 2011. The mine operator established a written Job Safety Analysis (JSA) for the task of changing screens and trained all persons regarding these

safe procedures. The mine operator also trained all persons in the use of fall protection where there is a danger of falling.

Approved: ________________ Date: __________________________
Donald J. Foster – District Manager

LIST OF APPENDICES

Appendix A-Persons Participating in the Investigation

Appendix B-Victim Data Sheet

APPENDIX A

Persons Participating in the Investigation

Lafarge North America, Inc.
Brian D. McNamara, Division Safety Manager
Gregory S. Owens, Plant Manager
Gary W. Barber, Superintendent
Vikram A. Wagh, Vice President

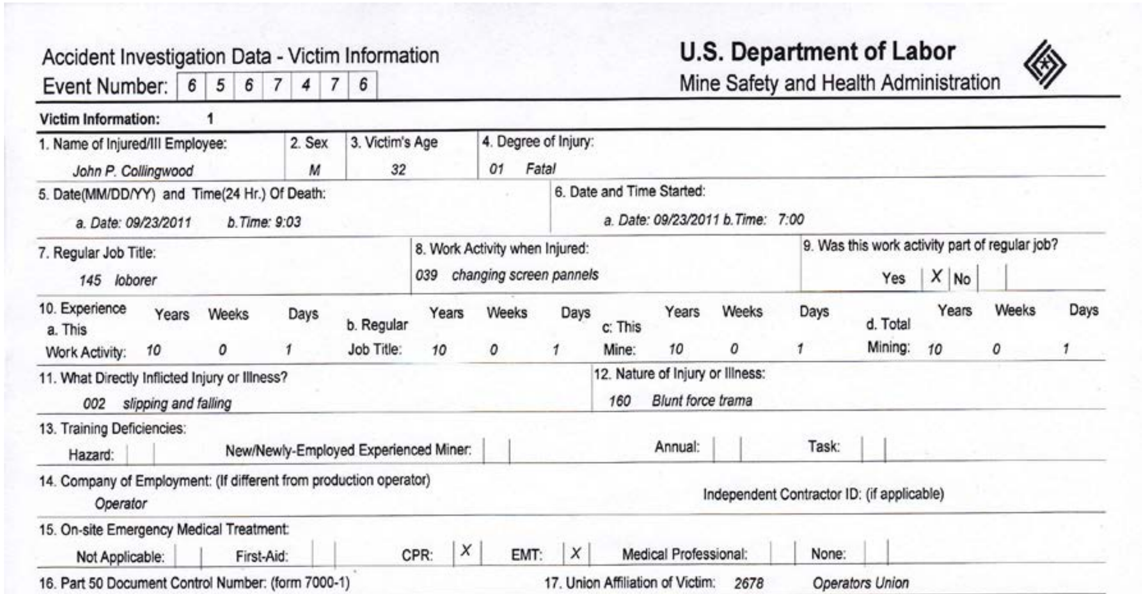
Council for Lafarge North America, Inc.
Law Office of Adele L. Abrams P.C.

International Union of Operating Engineers
Joseph W. Palmeri, Business Representative

Mine Safety and Health Administration

Thomas J Shilling, Mine Safety and Health Inspector
Kenneth J. Chamberlin, Mine Safety and Health Specialist

Appendix B



Accident Investigation Data - Victim Information

Event Number: 6 5 6 7 4 7 6

U.S. Department of Labor

Mine Safety and Health Administration

Victim Information: 1

1. Name of Injured/Ill Employee: *John P. Collingwood*
2. Sex: *M*
3. Victim's Age: *32*
4. Degree of Injury: *01 Fatal*
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: *a. Date: 09/23/2011 b. Time: 9:03*
6. Date and Time Started: *a. Date: 09/23/2011 b. Time: 7:00*
7. Regular Job Title: *145 loborer*
8. Work Activity when Injured: *039 changing screen pannels*
9. Was this work activity part of regular job? Yes X No

10. Experience

	Years	Weeks	Days
a. This Work Activity:	10	0	1
b. Regular Job Title:	10	0	1
c. This Mine:	10	0	1
d. Total Mining:	10	0	1

11. What Directly Inflicted Injury or Illness? *002 slipping and falling*
12. Nature of Injury or Illness: *160 Blunt force trama*
13. Training Deficiencies: Hazard: New/Newly-Employed Experienced Miner: Annual: Task:
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: X EMT: X Medical Professional: None:
16. Part 50 Document Control Number: (form 7000-1)
17. Union Affiliation of Victim: *2678 Operators Union*