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

## REPORT OF INVESTIGATION

**Surface Nonmetal Mine**
**(Crushed and Broken Limestone)**

**Fatal Falling Material Accident**
**January 7, 2013**

**Lafarge West, Inc.**
**Three Rivers Quarry**
**Smithland, Livingston County, Kentucky**
**Mine I.D. No. 15-00100**

**Investigators**

**Michael Evans**
**Mine Safety and Health Specialist**

**James Croft**
**Supervisory Mine Safety and Health Inspector**

**Michael Pruitt**
**Mine Safety and Health Specialist**

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

## OVERVIEW

On January 7, 2013, Todd Sumlin, Assistant Plant Manager, age 49, was injured when a large rock fell from a highwall and struck him in the left shoulder. He was working from a telescopic boom work platform (manlift) gathering rock samples from the face of the highwall. Sumlin was hospitalized and died on January 19, 2013, as a result of his injuries.

The mine was under a contractual obligation to supply a product that met certain specifications for a customer. The results of drill-shaving samples taken in December, 2012, indicated the location of non-specification material to be within 25-30 feet from the top of the highwall. In order to separate this material during the drilling and blasting process, Sumlin attempted to identify the exact location of the band of non-specification rock.

The accident occurred due to management's lack of procedures and controls to prevent ground conditions from creating a hazard of falling rocks before work or travel was permitted in the affected area. Sumlin was working close to the face of a highwall taking rock samples. Additionally, Sumlin did not receive newly hired experienced miner training when he was hired.

## GENERAL INFORMATION

Three Rivers Quarry, a surface crushed limestone mine, owned and operated by Lafarge West Inc., is located in Smithland, Livingston County, Kentucky. The principal operating official is Gary Proctor, Plant Manager. The mine operates three 8-hour shifts per day, five days per week. Total employment is 85 persons.

The mine is a surface limestone operation using multiple pits and a multi-bench mining method. The limestone is drilled and blasted. The material is loaded into haul trucks with a front-end loader and transported to the on-site processing plant. Finished materials are sold for various uses in the construction industry.

The Mine Safety and Health Administration (MSHA) completed the last regular inspection at this operation on August 7, 2012.

## DESCRIPTION OF THE ACCIDENT

On the day of the accident, January 7, 2013, Todd Sumlin (victim) reported to the mine at approximately 6:00 a.m. Sumlin met Ronnie Ramage, Front-end Loader Operator, and told him to travel to the White Rock Ledge area of the pit. Ramage drove his front-end loader to the White Rock Ledge and began preparing for a blast.

Sumlin went to the maintenance office where he met Chuck Wright, Electrician, and Doug Hale, Maintenance Supervisor. Sumlin asked Hale if anyone could operate a manlift because he needed to use it to take samples from a highwall in the pit. Hale suggested that Wright help Sumlin. Wright said he could only task train Sumlin on the manlift because taking the rock samples was not electrical work. Sumlin and Wright went to the manlift located at the shop. Wright conducted a pre-operational check of the machine and described its safety features and operating controls to Sumlin. At approximately 8:00 a.m., Wright drove the manlift about a mile to the pit because Sumlin was not dressed for the cold weather.

Sumlin went to the White Rock Ledge where he met Ramage. Sumlin used hand signals to instruct Ramage to push a rock barricade off the top of the highwall by using his front-end loader's bucket placed at a 45 degree angle to the highwall face. After Ramage pushed the rocks off the ledge of the highwall, Sumlin told him to place a weight on the end of a tape measure, mark the tape measure at 36 feet, and throw the weighted end of the tape measure over the ledge of the highwall. Ramage threw the tape measure over the ledge and adjusted it until the 36-foot mark was located at the top corner of the ledge.

Sumlin went to the bottom of the highwall and looked at the tape measure hanging down the highwall face. Sumlin waved his arm signaling Ramage to bring the front-end loader to the bottom of the highwall. Ramage drove it to the bottom of the highwall where Sumlin told him to use the machine's bucket to flatten a rock barricade directly in front of the area where the tape measure was hanging.

About 9:00 a.m., Wright arrived with the manlift and parked it on the flat area that Ramage had just created. Wright helped Sumlin don a fall protection harness and observed him operate the manlift. Wright observed Sumlin operating the machine for about 5 to 10 minutes and then drove Sumlin's pickup truck to the break room.

About 9:15 a.m., Wright returned to the White Rock Ledge, parking the pickup truck approximately 75 yards from Sumlin to observe him operating the manlift. Wright noticed Sumlin had painted measurements on the face of the highwall and began to extract small pieces of rock samples from the face.

At approximately 9:24 a.m., Wright saw a large rock fall from the highwall and hit Sumlin on the left shoulder. Wright drove the pickup truck to the manlift as Sumlin lowered the platform to the ground. Wright asked Sumlin if he was OK and Sumlin replied that he was not and to call 911. Wright used his cell phone to call Becky Glendening, Weight Master, and told her to call 911.

Wright helped Sumlin remove the fall protection harness as they walked to the pickup truck. Wright helped Sumlin into the pickup truck and drove him to the entrance gate where they waited a few minutes until Emergency Medical Services (EMS) arrived. EMS conducted an evaluation of Sumlin's condition and transported him to Lourdes Hospital in Paducah, Kentucky. Sumlin was hospitalized and had surgery on January 9, 2013. On January 11, 2013, Sumlin, while still in the hospital, had a cardiac arrest. He remained unresponsive and died on January 19, 2013.

## INVESTIGATION OF ACCIDENT

MSHA was notified of the accident on January 11, 2013, at 2:17 p.m. by a telephone call to the National Call Center from Daniel Thompson, Health and Safety Manager. The National Call Center notified Michael Evans, Mine Safety and Health Specialist, and an investigation started that same day. MSHA issued an order pursuant to Section 103(j) of the Mine Act. Upon arrival of the first Authorized Representative (AR), MSHA modified the order to section 103(k) of the Mine Act.

MSHA's accident investigation team traveled to the mine, conducted a physical inspection of the accident scene, interviewed employees, and reviewed conditions and work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management, employees, and rescue agencies.

## DISCUSSION

### Location of the Accident

The accident occurred in the #2 Pit at an area referred to as the White Rock Ledge. This area had not been a working face since the mine was acquired on December 10, 2010. The results of drill shaving samples taken in December, 2012, indicated the location of non-specification material to be within 25-30 feet from the top of White Rock Ledge. According to interviews, the method used to take rock samples at the mine was to collect the shavings from the drill holes.

On the day of the accident, Sumlin, working from a platform on the manlift, took rock samples from the face of the highwall using a 3-foot long grasping tool. He painted lines and numbers on the face of the 45-foot highwall to indicate where the rock samples were obtained for subsequent identification. Sumlin placed the rock samples into marked plastic bags.

During the investigation, the investigators determined 9 plastic bags were marked with various footages but only 8 contained rock samples. A bag marked 31-foot was empty. Tape measurement of this marking indicated the intended location for the 31-foot sample to be about 10 feet above ground level. The number 35 was painted on the highwall and was the lowest point marked.

The investigators could not determine the exact location where the 240 pound rock fell from the highwall and struck Sumlin.

### Manlift

The manlift the victim was working from, when the accident occurred, was a Genie S-125 telescopic boom work platform. According to the manufacturer's specifications, the machine had a working height of 131 feet, an 80-foot horizontal reach, and a 500 pound lift capacity. The work platform was self-leveling. The aerial platform was inspected and no defects were observed. The operation of the machine was not considered to be a contributing factor to the accident.

### Weather

The weather on the day of the accident was clear with a temperature of approximately 32 degrees Fahrenheit. Weather was not considered to be a contributing factor to the accident.

## TRAINING AND EXPERIENCE

Todd Sumlin, victim, worked at this mine for about one year. He had 29½ years prior mining experience working at mines in Florida. A representative of MSHA's Educational Field Services staff conducted an in-depth review of the mine operator's training records. MSHA determined the mine operator did not provide newly hired experienced miner training to Sumlin when he was hired on March 12, 2012. Sumlin's previous mining experience was at mines that had different geology and methods of mining than the mine where he was employed in Kentucky. Sumlin's prior mining experience was gained working at mines where the terrain was lower and this experience did not include working near highwalls with vertical faces.

## ROOT CAUSE ANALYSIS

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

**Root Cause:** Management did not have procedures and controls in place to prevent ground conditions from creating a hazard of falling rocks before work or travel was permitted in the affected area. Sumlin was working close to the face of a highwall taking rock samples.

**Corrective Action:** Management established new procedures and controls to collect rock samples from drill shavings, eliminating the need for persons to take samples near highwalls. All persons required to take rock samples were instructed in these new procedures. Additionally, management provided extensive training to all persons regarding working near highwalls.

**Root Cause:** Management did not provide required newly hired experienced miner training to Sumlin when he was hired.

**Corrective Action:** Management will provide newly hired experienced miner training as required to any newly hired miners requiring this type of training.

## CONCLUSION

The accident occurred due to management's lack of procedures and controls to prevent ground conditions from creating a hazard of falling rocks before work or travel was permitted in the affected area. Sumlin was working close to the face of

a highwall taking rock samples. Additionally, Sumlin did not receive newly hired experienced miner training when he was hired.

## ENFORCEMENT ACTIONS

**Issued to Lafarge West, Inc.**

Order Number 8719782 -- issued on January 14, 2012, under the provisions of Section of the Mine Act:

> *An accident occurred at this operation on January 7, 2013 at approximately 09:25 hours. This order is being issued, under section 103(j) of the Federal Mine Safety and Health Act of 1977, to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity at all of the highwall areas of the mine, including top, face and toe of the highwalls, also included in the order is the rock that fell form the wall that struck the miner, until MSHA has determined that is safe to resume normal mining operations in the area. This order was initially issued orally to the mine at 07:56 hours and has now been reduce to writing.*

This order was terminated on April 1, 2013, after conditions that contributed to the accident no longer existed.

Citation Number 8641304 -- issued under the provisions of Section 104(d1) of the Mine Act for a violation of 30 CFR 56.3200:

> *An accident occurred at this mine on January 7, 2013, when the assistant plant manager was struck by a large rock. He was working from a man lift, in close proximity to the face of the highwall, extracting rock samples from the highwall face. The victim was hospitalized and died on January 19, 2013, as a result of his injuries. Management did not take down or support ground conditions that created a hazard to the victim before he worked or traveled in the affected area. Management directed the removal of barriers that prevented access to the hazardous area and the victim began working there. Management engaged in aggravated conduct constituting more than ordinary negligence when performing work before any corrective action was taken to correct or eliminate the fall of material hazard. This violation is an unwarrantable failure to comply with a mandatory standard.*

Order Number 8641305-- issued under the provisions of Section 104(d)(1) of the Mine Act for a violation of 30 CFR 46.6(b)(1):

> *An accident occurred at this mine on January 7, 2013, when the assistant plant manager was struck by a large rock. He was working from a man lift, in close proximity to the face of the highwall, extracting rock samples from the highwall face. The victim was hospitalized and died on January 19, 2013, as a result of his injuries. The victim was hired at this mine on March 12, 2012, and the mine operator did not provide newly hired experienced miner training. The victim previously worked in mines in Florida, which differ in geological and method of mining or operation than the mine he was employed at in Kentucky. Management engaged in aggravated conduct constituting more than ordinary negligence by failing to provide newly hired experienced miner training to the victim. This violation is an unwarrantable failure to comply with a mandatory standard.*

Approved: _____ Date May 13 2013
Michael A. Davis
Southeast District Manager

## APPENDIX A

## Persons Participating in the Investigation

**Lafarge West, Inc.**

| | |
|---|---|
| Debra McKinny | Safety Coordinator |
| Dan Thompson | Health & Safety Manager |
| Gary Proctor | Plant Manager |
| Chuck Wright | Electrician |
| Doug Hale | Maintenance Manager |
| Becky Glendening | Weigh Master |
| Ronnie Ramage | Front-End Loader Operator |

**Mine Safety and Health Administration**

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|---|---|
| Michael Evans | Mine Safety and Health Specialist |
| James Croft | Supervisory Mine Safety and Health Inspector |
| Michael Pruitt | Mine Safety and Health Specialist |

# Appendix B

Accident Investigation Data - Victim Information

Event Number: 6 5 2 2 8 0 1

**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: |
|---|---|---|---|
| *Todd Sumlin* | *M* | *49* | *01 Fatal* |

| 5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: | 6. Date and Time Started: |
|---|---|
| *a. Date: 01/19/2013 b.Time: 9:38* | *a. Date: 01/07/2013 b.Time: 9:25* |

| 7. Regular Job Title: | 8. Work Activity when Injured: | 9. Was this work activity part of regular job? |
|---|---|---|
| *149 Assistant Plant Manager* | *098 Gathering Rock Samples* | Yes \| No *X* |

| 10. Experienc | Years | Weeks | Days | | Years | Weeks | Days | | Years | Weeks | Days | | Years | Weeks | Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| a. This Work Activity: | *0* | *0* | *1* | b. Regular Job Title: | *0* | *50* | *0* | c. This Mine: | *0* | *50* | *0* | d. Total Mining: | *30* | *25* | *0* |

| 11. What Directly Inflicted Injury or Illness? | 12. Nature of Injury or Illness: |
|---|---|
| *089 240 pound rock from highwall face* | *170 broken bones left side of body* |

13. Training Deficiencies

Hazard: | New/Newly-Employed Experienced Miner *X* | 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: *X* | CPR: | EMT: *X* | Medical Professional: | None:

16. Part 50 Document Control Number: (form 7000-1) *220130090016*

17. Union Affiliation of Victim: *9999* *None (No Union Affiliation)*