

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

**REPORT OF INVESTIGATION**

**Surface Nonmetal Mine  
Crushed, Broken Granite**

**Fatal Powered Haulage Accident  
September 8, 2016**

**Neverson Quarry  
Hanson Aggregates Southeast, LLC  
Sims, Wilson County, North Carolina  
Mine I.D. No. 31-00074**

**Accident Investigators**

**Jeffrey Phillips  
Supervisory Mine Safety and Health Inspector**

**Steaven D. Caudill  
Mine Safety and Health Inspector**

**Jonathon A. Hall  
Mechanical Engineer – MSHA Technical Support**

**Originating Office**

**Mine Safety and Health Administration  
Southeastern District  
1030 London Drive, Suite 400  
Birmingham, AL 35211  
Samuel K. Pierce, District Manager**

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## OVERVIEW

Richard Smith, a 58-year old Haul Truck Operator, was fatally injured on September 8, 2016. The victim was operating a Caterpillar 773E haul truck and was returning to the pit for loading when the truck, traveling down a 9% grade, veered from the right to the left side of the haul road and traveled over the berm at the top of the highwall. The truck landed upside down approximately 201 feet below.

The accident occurred because the mine operator failed to ensure the victim maintained control of the truck and did not ensure seat belts were being used properly.

## **GENERAL INFORMATION**

Hanson Aggregates Southeast, LLC, Neverson Quarry (Hanson) is a crushed granite operation located in Sims, Wilson County, North Carolina. John Wakefield is the Plant Manager and Robert Grimes is the Plant Foreman. The plant operates five days per week with one, ten- to twelve-hour shift per day. There are a total of fifteen employees at this mine.

Hanson drills and blasts granite from a multi-level bench, which is then loaded into haul trucks with a front-end loader. The material is delivered to on-site processing facilities and conveyed to stockpiles. The finished product is sold for use in construction.

The Mine Safety and Health Administration (MSHA) completed the last regular inspection at this operation on April 11, 2016.

## **DESCRIPTION OF THE ACCIDENT**

On September 8, 2016, Richard Smith (victim) reported to work at 7:03 a.m. Smith reported to the shop to clock in and perform a preoperational inspection of his haul truck. Grimes was at the shop checking preoperational inspection records when Smith arrived. That morning, there were three haul trucks and two front-end loaders in operation. The three haul truck operators, Kenneth Lamn, Richie Coleman, and Smith, started to make their first round at approximately 7:30 a.m. Otis Finch (Pit Loader Operator) conducted the daily work place exam and was working in the pit. Work progressed normally throughout the morning.

At 1:45 p.m., Smith dumped his twenty-third load and was headed back to the pit for another. Danny Manning (Utility) was in the lower ramp sump area moving shot rock when he heard a loud boom and thought he had blown a tire. Manning turned around and saw rocks falling from the highwall and a large cloud of dust. When the dust cleared, Manning saw the haul truck upside down and immediately radioed that a truck had gone over the highwall. Wakefield radioed for everyone to stop where they were and instructed Cheryl Gilliam (Scale Operator) to call 911. Emergency services were contacted at 1:48 p.m.

Coleman stopped his loaded truck on level ground near the dump hopper and Grimes directed traffic. Lamn remained in his truck and did not move it. Manning went to the truck cab and did not see Smith inside. Wakefield traveled to the scene and observed Smith's body on top of the upside down truck.

Emergency services arrived at 1:58 p.m. The Sims and Bailey Volunteer Fire Departments used a ladder truck to recover Smith, who was pronounced dead at the scene.

Measurements made during the investigation showed that Smith's haul truck traveled 655 feet down the pit ramp on a 9% grade, veered to the left and struck the approximately 5-foot high berm. The truck traveled approximately 64 feet along the top of the berm before rolling over the highwall.

## **INVESTIGATION OF THE ACCIDENT**

Safety and Health Manager, Bill Owens, notified MSHA of the accident at 2:01 p.m. on September 8, 2016, by a telephone call to the Department of Labor's National Contact Center (DOLNCC). The DOLNCC contacted the MSHA Southeast District Office and an investigation was started the same day. In order to facilitate a rescue effort, an order pursuant to Section 103(j) of the Federal Mine Safety & Health Act of 1977, was verbally issued to the mine operator. This order was subsequently modified to a Section 103(k) order to ensure the safety of miners.

MSHA's accident investigation team conducted a physical inspection of the accident scene, interviewed employees, reviewed training documentation, and examined work procedures relevant to the accident. MSHA Technical Support participated in the investigation to determine whether equipment defects or factors contributed to the accident.

## **DISCUSSION**

### **Weather**

The weather at the time of the accident was clear with a temperature of 91 degrees Fahrenheit and light winds. Weather was not considered to be a factor in the accident.

### **Training and Experience**

The victim had over twenty-three years of mining experience with over two years at this operation. MSHA conducted an in-depth review of the victim's training records and determined that there were no contributory training deficiencies.

### **General Truck Information**

The truck involved in the accident was a Caterpillar Model 773E, rigid frame, off-road, 50-ton dump truck manufactured in 2006 and delivered in 2007. The digital hour meter would not power on after the accident, but according to the Technical Support report, the truck had over 20,000 hours of operation. The truck had a total gross weight rating of approximately 185,000 pounds with a 100,000-pound payload.

The truck was powered by a Caterpillar Model 3412, 650 horsepower, 12-cylinder, turbocharged and aftercooled diesel engine. The transmission had seven forward speeds, neutral, and one reverse speed.

## **Brakes**

Damage sustained during the accident made it impossible to perform a complete functional brake system test and air pressure could not be supplied remotely to test the brakes. Technical Support inspected the brake system components and did not find any defects that would have contributed to the accident.

## **Seat Belt**

The truck was equipped with a 3-point seat belt. Dried dirt on the seat belt latch plate indicated that the seat belt had not been used recently. The seat belt latched properly when tested. The accident investigation team determined that the victim was ejected from the truck because he was not using the seat belt.

Additionally, there were rags tied to the seat belt to prevent full retraction of the belt. According to interviews and discussions held as part of the accident investigation, mine personnel used these rags for comfort by sliding them along the belt to keep the belt from constantly tightening. Other mine vehicle seat belts were also equipped with these rags.

## **ROOT CAUSE ANALYSIS**

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

- *Root Cause:* The mine operator failed to ensure the victim maintained control of the equipment while in motion

*Corrective Action:* The mine operator trained all employees regarding the dangers associated with operating equipment when tired, sleepy, and feeling ill. Employees were made aware that they are able to take breaks when they are not feeling alert and are to notify management in such cases.

- *Root Cause:* The mine operator failed to ensure seat belts were being used properly.

*Corrective Action:* The mine operator removed all rag modifications and trained all employees in using seat belts properly and in seat belt inspection and maintenance.

## **CONCLUSION**

After working without incident throughout the morning of September 8, the haul truck Richard Smith was operating, veered off the road, traveled over the berm and fell approximately 201 feet over the highwall. Based on the findings of MSHA's investigation, there was no evidence of mechanical or equipment malfunction or defect. The victim failed to maintain control of the haul truck and failed to wear his seat belt.

## ENFORCEMENT ACTIONS

**Order No. 8905873** – issued September 8, 2016, pursuant to Section 103(j) of the Federal Mine Safety & Health Act of 1977 (originally issued verbally and reduced to writing upon arrival of an inspector and subsequently modified to an order pursuant to Section 103(k)):

*An accident occurred at this operation on September 8, 2016, at approximately 1350 hours. As rescue and recovery work is necessary, this order is being issued, under Section 103(J) of the Federal Mine Safety and Health Act of 1977, to assure the safety of all persons at this operation. This order is also being issued to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity in the pit area from the top pit ramp to the bottom of bench #8 except to the extent necessary to rescue an individual or prevent or eliminate an imminent danger until MSHA has determined that it is safe to resume normal mining operations in this area. This order applies to all person engaged in the rescue and recovery operation and any other person on-site. This order was initially issued orally to the mine operator at 1446 hour and is now reduced to writing.*

**Citation No. 8816532** – issued November 2, 2016, pursuant to Section 104(a) of the Federal Mine Safety & Health Act of 1977 for a violation of 30 CFR § 56.9101:

*On September 8, 2016, a fatal accident occurred at this operation when a haul truck operator drifted across the haul road while traveling down a 9% grade. The haul truck made contact with the left side berm and rolled over a 201 foot highwall landing upside down in the pit below. The operator did not maintain control of the haul truck while traveling down the haulroad.*

**Order No. 8816533** – issued November 2, 2016, pursuant to Section 104(d)(1) of the Federal Mine Safety & Health Act of 1977 for a violation of 30 CFR § 56.14131(a):

*On September 8, 2016, a fatal accident occurred at this operation when a haul truck operator drifted across the haul road while traveling down a 9% grade. The haul truck made contact with the left side berm and rolled over a 201 foot highwall landing upside down in the pit below. The haul truck operator was not wearing a seat belt and was ejected from the truck. Management engaged in aggravated conduct, constituting more than ordinary negligence by not ensuring the truck operators were wearing their seat belts and by not correcting the altered state of harnesses in the haul trucks. This violation is an unwarrantable failure to comply with a mandatory standard.*

Approved: 

Samuel K. Pierce  
Southeast District Manager

Date: 1/20/17

## APPENDIX A – Persons Participating in the Investigation

### Hanson Aggregates Southeast, LLC

John Wakefield	Plant Manager
Toby Lee	Operations Manager
Bill Owens	Safety and Health Manager
Robert Grimes	Plant Foreman
Richie Coleman	Haul Truck Operator
Otis Finch	Loader Operator (Pit)
Kenneth Lamn	Haul Truck Operator
Danny Manning	Utility
Victor Willingham	Primary Crusher Operator
Cheryl Gilliam	Scale Operator
Margo Lopez	Attorney (Ogletree, Deakins, Nash, Smoak & Stewart, P.C.)
Bernard Tisdale	Attorney (Ogletree, Deakins, Nash, Smoak & Stewart, P.C.)

### NCDOL

Beau Thomas	Mine and Quarry Bureau
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### Mine Safety and Health Administration

Jeffrey Phillips	Supervisory Mine Safety and Health Inspector
Steaven Caudill	Mine Safety and Health Inspector
Jonathan Hall	Mechanical Engineer, MSHA Technical Support
Ricky Boggs	Mine Safety and Health Specialist



## APPENDIX B – Victim Information

Accident Investigation Data - Victim Information

**U.S. Department of Labor**  
Mine Safety and Health Administration



Event Number: 

6	7	1	4	1	3	4
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Victim Information: 1

1. Name of Injured/Ill Employee <i>Richard Smith</i>		2. Sex <i>M</i>	3. Victim's Age <i>58</i>	4. Degree of Injury <i>01 Fatal</i>					
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a Date: 09/08/2016 b Time: 13:50</i>				6. Date and Time Started: <i>a Date: 09/08/2016 b Time: 7:00</i>					
7. Regular Job Title <i>176 Haul Truck Operator</i>			8. Work Activity when Injured: <i>055 Operating a haul truck</i>			9. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
10. Experience		a. This		b. Regular		c. This		d. Total	
	Years	Weeks	Days	Years	Weeks	Days	Years	Weeks	Days
Work Activity	<i>2</i>	<i>9</i>	<i>0</i>	Job Title:	<i>2</i>	<i>9</i>	<i>0</i>	Mining	<i>23</i>
								<i>35</i>	<i>0</i>
11. What Directly Inflicted Injury or Illness? <i>127 Impact due to truck going over highwall</i>				12. Nature of Injury or Illness <i>370 Fatal injuries</i>					
13. Training Deficiencies:									
Hazard:		New/Newly-Employed Expenenced Miner			Annual:		Task:		
14. Company of Employment: (If different from production operator) <i>Operator</i>							Independent Contractor ID: (if applicable)		
15. On-site Emergency Medical Treatment									
Not Applicable:		First-Aid:		CPR:		EMT:		Medical Professional:	
								None <input checked="" type="checkbox"/>	
16. Part 50 Document Control Number, (form 7000-1)				17. Union Affiliation of Victim: <i>9999</i>		<i>None (No Union Affiliation)</i>			