

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

**REPORT OF INVESTIGATION**

**Surface Nonmetal Mine  
(Construction Sand and Gravel)**

**Fatal Powered Haulage Accident  
September 15, 2009**

**Ozark Premium Sand, LLC  
Ozark Premium Sand, LLC  
Bradford, Jackson County, Arkansas  
Mine ID No. 03-01970**

**Investigators**

**Maria C. Rich  
Supervisory Mine Safety and Health Inspector**

**Carl D. Jones  
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 September 15, 2009, Wynetta J. Raye, delivery truck driver, age 59, was fatally injured when she was struck by a front-end loader. Raye parked a delivery truck on a county road adjacent to the mine and walked onto the site to deliver a package. The front-end loader operator was backing the loader toward Raye's truck but did not see her behind the loader.

The accident occurred because management policies and procedures did not ensure that foot traffic was adequately controlled. Signs or signals that warned of hazardous conditions had not been placed at all appropriate locations at the mine.

The mine was accessible through two entrances from the county road. Delivery drivers had been instructed to report to the office but no one usually worked there. Consequently, the drivers had to search for someone to sign for deliveries.

## **GENERAL INFORMATION**

Ozark Premium Sand LLC (Ozark), a surface processing plant, owned and operated by Ozark Premium Sand, LLC, was located near Bradford, Jackson County, Arkansas. The principal operating official was Steven R. Hackmann, Co-owner. The mine operated two 10-hour shifts per day, 6-7 days per week. Total employment was six persons.

FedEx, a package delivery service, provided deliveries to Ozark on a routine basis. Wynetta Raye was employed by FedEx.

Sand was delivered from another mine to this operation, where it was dried and screened. Finished products were sold for area construction projects.

The last regular inspection at this operation was completed on July 13, 2009.

## **DESCRIPTION OF THE ACCIDENT**

On the day of the accident, Wynetta Raye started working at 9:00 a.m., about an hour after her normal starting time. She delivered packages throughout the day. About 2:05 p.m., Raye parked on the county road in front of the mine and walked toward a front-end loader that was operating about 200 feet away.

Lawrence Borne, Front-end Loader Operator, was operating the loader and moving material from a stockpile to the feeder hopper at the plant. About the time Raye arrived, Borne moved the loader up the feeder hopper ramp and placed a bucket of material in the hopper. He then backed the loader down the ramp, steered right, and continued to back up until it was situated about 90 degrees to the stockpile and out of the travel lane of oncoming customer trucks. The loader stopped 134 feet from the feeder hopper.

Borne then looked toward the stockpile with the intention of retrieving another bucket load of material. At that time, Gregory Bradford, Customer Truck Driver, was sitting in the cab of his parked truck about 130 feet from the loader. Bradford honked his horn because he noticed that Raye had walked within a few feet of the back end of the front-end loader.

Both Borne and Raye looked toward Bradford. Raye waved a package in the air, turned, and started to walk back toward her truck. Borne looked over his shoulder and saw the FedEx truck parked on the nearby county road but did not see Raye.

Borne started backing the front-end loader toward the FedEx truck about the same time that Raye started walking toward the truck. Bradford again honked his horn to get Borne's attention but Borne did not see Raye. Borne continued backing the loader, struck Raye, and traveled another 70 feet. He stopped the loader about 60 feet from the FedEx truck and saw Raye lying on the ground.

Landon Turner, Foreman, heard the horn and exited the scale house. He immediately called for emergency medical services (EMS). EMS arrived at 2:29 p.m. and transported Raye to a local hospital where she was pronounced dead by the attending physician. The cause of death was attributed to crushing injuries.

## **INVESTIGATION OF THE ACCIDENT**

On the day of the accident, the Mine Safety and Health Administration (MSHA) was notified at 2:27 p.m. by a telephone call from Steven Hackmann, Co-owner, to MSHA's emergency hotline. David Hamm, Mine Safety and Health Specialist, was notified and an investigation was started the same day. An order was issued pursuant to section 103(j) 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 FedEx management and employees.

## **DISCUSSION**

### **Location of the Accident**

The accident occurred in a level area 134 feet north of Jackson County Road #4 (see Appendix B). The victim walked onto the mine site from her delivery truck after parking it on the county road. The front-end loader backed about the same distance from the feeder hopper before striking the victim.

The ground in the area of the accident was muddy due to rain that had ceased prior to the accident. The sky was cloudy and the temperature was 78 degrees Fahrenheit. There was no fog or other weather condition that contributed to the accident.

### **Front-end Loader**

The loader involved in the accident was a Kawasaki 70ZV front-end wheel loader equipped with a 4-yard bucket. It was used to load customer trucks and to move material from stockpiles to the feeder hopper at the plant. The loader was traveling in first gear in reverse at the time of the accident. According to the manufacturer's specifications, the maximum speed for first gear in reverse was about 4.5 miles per hour or 6.6 feet per second.

The front-end loader was inspected after the accident. The back-up alarm, reverse lights, tail lights, and all braking systems were found to be in good working condition. The windows and mirrors were clean and did not have any defects.

### **Training and Experience**

Wynetta Raye had 13 years and 18 weeks of experience as a FedEx delivery driver. She had been delivering packages to Ozark once a week for 1 year and 10 weeks. Raye had received site specific hazardous awareness training as required by 30 CFR Part 46.

Lawrence Borne had 21 weeks of experience as a front-end loader operator, all at this mine. He also operated similar heavy equipment at non-MSHA sites for 3 years. Borne had received all training in accordance with 30 CFR Part 46.

### **ROOT CAUSE ANALYSIS**

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

**Root Cause:** Management policies and procedures did not ensure that foot traffic was adequately controlled. Signs or signals that warn of hazardous conditions had not been placed at all appropriate locations at the mine. Delivery drivers were instructed to report to the office but no one usually worked there.

**Corrective Action:** The operator placed signs at both entrances to the mine and other appropriate locations warning persons of various hazards at the site. A telephone and several cell phone numbers were placed beneath a sign in the office instructing visitors to remain in the office and call mine personnel to meet them.

### **CONCLUSION**

The accident occurred because management policies and procedures did not ensure that foot traffic was adequately controlled. Signs or signals that warned of hazardous conditions had not been placed at all appropriate locations at the mine.

The mine was accessible through two entrances from the county road. Delivery drivers were instructed to report to the office but no one usually worked there. Consequently, the drivers had to search for someone to sign for the deliveries.

### **ENFORCEMENT ACTIONS**

Order No. 6314995 was issued on September 15, 2009, under the provisions of Section 103(j) of the Mine Act:

A fatal accident occurred at this operation on September 15, 2009 at approximately 2:15 p.m. As rescue and recovery work is necessary, this order is being issued 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 at or near the FedEx truck and front-end loader until

MSHA has determined it is safe to resume normal mining operations in this area. This order applies to all persons engaged in the rescue and recovery operations and any persons on site. This order was initially issue orally to the mine operator at 2:58 p.m. and has now been reduced to writing.

This order was modified to a 103(k) order upon arrival of Carl Jones, Mine Safety and Health Inspector, at the mine site. It was terminated on September 16, 2009, after conditions that contributed to the accident no longer existed.

CITATION No. 7893961 was issued on October 9, 2009, under the provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 56.9100(b):

A fatal accident occurred at this operation on September 15, 2009, when a delivery truck driver was struck by a front-end loader. The victim had exited her delivery truck and was approaching the loader to deliver a package. The mine operator did not post signs or signals that warn of hazardous conditions at appropriate locations at the mine.

This citation was terminated on October 27, 2009, after the operator placed signs at both entrances to the mine and other appropriate locations warning persons of various hazards at the site. A telephone and several cell phones numbers were placed beneath a sign in the office instructing visitors to remain in the office and call mine personnel to meet them.

Approved: \_\_\_\_\_

Edward E. Lopez  
District Manager

Date: \_\_\_\_\_

## **LIST OF APPENDICES**

APPENDIX A – Persons Participating in the Investigation

APPENDIX B – Plan View of the Mine Site

APPENDIX C – Accident Investigation Data - Victim Information Form



## APPENDIX A

### PERSONS PARTICIPATING IN THE INVESTIGATION

#### **Ozark Premium Sand, LLC**

Steven R. Hackmann	Co-owner
Landon O. Turner	Supervisor

#### **Cincinnati Insurance Companies**

Parish Pollard	Claims Representative
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#### **FedEx**

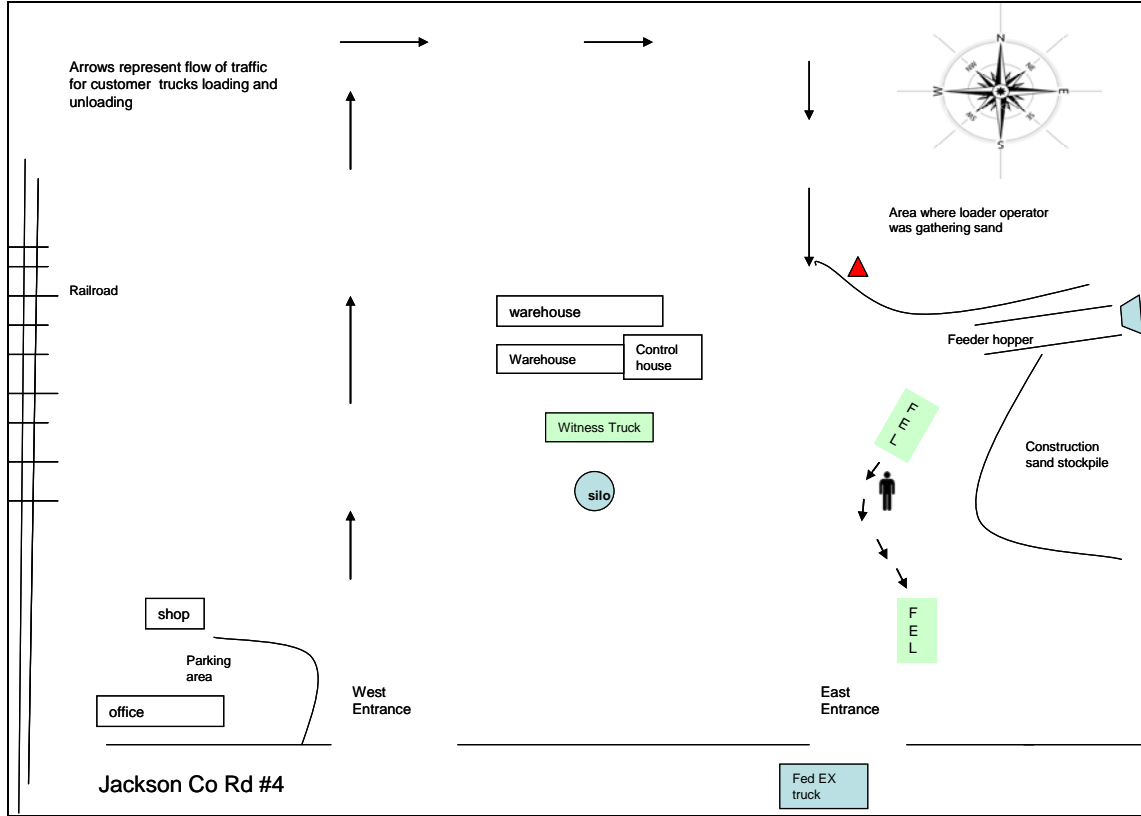
D. Steven Kellett	Senior Safety Specialist
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#### **Mine Safety and Health Administration**


Maria C. Rich	Supervisory Mine Safety and Health Inspector
Carl D. Jones	Mine Safety and Health Inspector

# APPENDIX B

## Plan View of the Mine Site



## APPENDIX C

Accident Investigation Data - Victim Information										U.S. Department of Labor		
Event Number: 1 0 9 4 4 5 1										Mine Safety and Health Administration		
<b>Victim information:</b> 1												
1. Name of Injured/Ill Employee: <i>Wynetta J. Raye</i>			2. Sex: <i>F</i>		3. Victim's Age: <i>59</i>		4. Degree of Injury: <i>01 Fatal</i>					
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 09/15/2009 b. Time: 15:10</i>						6. Date and Time Started: <i>a. Date: 09/15/2009 b. Time: 8:50</i>						
7. Regular Job Title: <i>199 FedEx delivery truck driver</i>				8. Work Activity when Injured: <i>092 walking</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	Years	Weeks	Days	
Work Activity:	<i>13</i>	<i>18</i>	<i>3</i>	Job Title:	<i>13</i>	<i>18</i>	<i>3</i>	Mine:	<i>1</i>	<i>10</i>	<i>3</i>	
11. What Directly Inflicted Injury or Illness? <i>110 front-end loader</i>						12. Nature of Injury or Illness: <i>170 crushing injuries</i>						
13. Training Deficiencies: Hazard: _____ New/Newly-Employed Experienced Miner: _____ Annual: _____ Task: _____												
14. Company of Employment: (If different from production operator) <i>FedEx</i> Independent Contractor ID: (if applicable)												
15. On-site Emergency Medical Treatment: Not Applicable: _____ First-Aid: _____ CPR: <input checked="" type="checkbox"/> EMT: <input checked="" type="checkbox"/> Medical Professional: _____ None: _____												
16. Part 50 Document Control Number: (form 7000-1)						17. Union Affiliation of Victim: <i>9999 None (No Union Affiliation)</i>						