MAI-2014-08

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

REPORT OF INVESTIGATION

Surface Nonmetal Mine
(Fire Clay)

Fatal Machinery Accident
April 24, 2014

Craig Neal and Sons, LLC
Contractor ID No. H869

at

Big River Industries
Gravelite Division
Erwinville, Pointe Coupee Parish, Louisiana
Mine ID No. 16-00033
Investigators

Michael R. Van Dorn
Supervisory Mine Safety and Health Inspector
Fred T. Marshall
Mechanical Engineer
Gerald Obre
Mine Safety and Health Inspector
Paul B. Shelby
Mine Safety and Health Specialist (Training)

Originating Office
Mine Safety and Health Administration
South Central District
1100 Commerce Street Room 462
Dallas TX 75242-0499
Michael D. Davis, District Manager

OVERVIEW

On April 24, 2014, James Gibson III, contract Dozer Operator, age 50, was killed when the dozer he was operating went out of control, traveled over a five foot windrowed berm, and went into a drainage canal. Gibson was not wearing a seat belt and was thrown from the operator's seat and ejected from the cab into the dozer's upright exhaust pipe. He landed on the ground, five feet behind the dozer.

The accident occurred due to contractor management's failure to ensure that the victim maintain control of the dozer at all times while he was operating it. Additionally, contractor management did not ensure that the victim wear a seat belt at all times while operating the dozer.

GENERAL INFORMATION

Gravelite Division, a surface fire clay mine owned and operated by Big River Industries, is located near Erwinville, Pointe Coupee Parish, Louisiana. The principal operating official is Brian Dowden, Vice-President of Operations. The mine operates two 12-hour shifts, 7 days a week. Total employment is 38 persons.

There are two active pits, Pit One and Pit Two, at the mine. A dozer is used to pull a disc harrow to break up or loosen the fire clay beds. Dozers then push the material into a 5-foot windrow where it is collected into scraper pans pulled by agricultural tractors. The fire clay is hauled to storage barns and then to the plant for processing. The finished product is sold for use as a cement additive.

Craig Neal and Sons, LLC is an excavating contractor located in Morganza City, Point Coupee Parish, Louisiana. The principal operating officials are Jarrod Neal and Michael Neal, Co-owners. Big River Industries contracted Craig Neal and Sons, LLC to excavate material in the pit area of the mine. Twelve contractor employees work one 12-hour shift, 5 days per week as weather permits. The contractor has worked at this mine for 10 years.

The Mine Safety and Health Administration (MSHA) completed the last regular inspection at this mine on March 4, 2014.

DESCRIPTION OF THE ACCIDENT

On the day of the accident, April 24, 2014, James Gibson III (victim) arrived at the mine at 6:45 a.m. to start his first day of work for the contractor. He met with Jarrod Neal, Co-owner. Neal reviewed Big River Industries safety rules with Gibson. At 7:15 a.m., Wayne Wells, contract Equipment Operator, arrived at the mine. Wells escorted Gibson to his assigned machine, a 750C LGP series II John Deere dozer. Wells assisted Gibson in conducting a pre-shift examination of the dozer. After that, they traveled approximately one mile to the pit area, arriving in Pit One at approximately 8:05 a.m. Ronnie David, contract Equipment Operator met Gibson and Wells. David reviewed Gibson's duties with him. Gibson was assigned to push up spilled or loose clay into a windrow at the edge of the pit. He was to then back up about 150 yards and push another blade of material onto the windrow. Gibson received additional

instructions on the mining procedures from David and Wells who were assigned to work in the same pit.

Gibson operated the dozer throughout the morning with no apparent problems. David motioned to Gibson indicating lunch time as the two traveled in tandem to the contractor's office and break area.

At 12:45 p.m., Gibson, Wells, and David returned to work in the pit. Gibson continued operating the dozer without incident. At approximately 5:20 p.m., David left Pit One to begin work in Pit Two. Gibson and Wells continued working in Pit One.

At approximately 5:36 p.m., Wells stopped disking activities with his dozer to allow Gibson to pass in front of him. Gibson's dozer passed Wells then started up the berm just as David had done several minutes previously. Wells did not see anything unusual and turned to his left away from Gibson to continue disking operations.

Gibson's dozer traveled over the berm, but continued 51 feet into the drainage canal before stopping. The dozer continued to run spinning mud and water into the air. Wells completed his pass around the pit and on his next approach observed Gibson's dozer in the drainage canal. Wells thought Gibson's dozer was stuck but he could not determine why the dozer was still spinning. He then saw Gibson lying on the ground directly behind the dozer.

Wells called David to report the accident. Wells and David both responded to assist Gibson. The dozer was still running at full throttle. Wells and David yelled to Gibson but he was nonresponsive. At 5:39 p.m., David called for Emergency Medical Services (EMS).

At 5:53 p.m., first responders from the mine arrived at the site to assist. Tanner Ceio, Erwinville Fire Department, climbed onto the dozer and shut it off to secure the scene. Point Coupee Parish Sheriff's Department personnel and the first responders began rescue efforts by pulling Gibson out of the mud and water. EMS and Med Flight arrived but the victim was nonresponsive. At 7:07 p.m., Ty Chaney, Coroner, pronounced Gibson dead. The cause of death was attributed to crushing injuries of the torso.

INVESTIGATION OF THE ACCIDENT

On April 24, 2014, MSHA was notified of the accident at 5:39 p.m. by a telephone call from Kim Stonecash, Human Resources Representative, to MSHA's National Call Center. The National Call Center notified Joseph Steichen, Assistant District Manager, and an investigation was started the same day. To ensure the safety of all persons, an order was issued pursuant to section 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.

MSHA's accident team traveled to the mine, made a physical inspection of the accident scene, interviewed the employees, and reviewed documents and work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management and employees and a representative from John Deere.

DISCUSSION

Location of the Accident
The accident occurred at the Northwest corner of Pit One.

Pit One Mining Process
Pit One is a flat area where clay is removed. It is approximately 250 yards long and 150 yards wide. A drainage canal, approximately 51 feet from the top of the windrowed berm, traverses the entire length of the pit. The canal is about four feet deep with approximately two feet of water in it. The pit is disked and then dozers push the loosened clay to the north end of the pit creating an approximate 5 feet high by 250 yard long windrow. This process digs the pit down several feet from the original lay of the ground. Dozers tram over the length of the windrow compacting the material to a 5-foot high berm which accommodates the load/haul process. An agriculture tractor, pulling a self-loading scraper pan, picks up the windrowed clay and transports the material to the plant area for processing.

Dozer
The dozer involved in the accident is a 2003 John Deere 750C LGP Series II Crawler Dozer with an all-hydraulic dozer blade. Product information indicated that it is equipped with a John Deere 6068T diesel engine with a rated output of 148 gross horsepower at 2,100 RPM. The dozer has a hydrostatic drive system for ground travel with each track driven by an independent hydraulic motor. The machine has an operating weight of approximately 36,600 pounds and a maximum ground speed of 6.8 MPH, or 10 feet/second, in both forward and reverse directions.

Investigators and a John Deere factory representative examined the dozer for defects. The dozer did not incur any damage during the accident. Consequently, the machine was in operational condition to conduct functional tests. The transmission, braking, steering, and electrical systems were found to be in operating condition with no defects.

Weather
The weather on the day of the accident consisted of clear skies with a temperature of 70 degrees Fahrenheit. Weather was not considered a factor in the accident.

TRAINING AND EXPERIENCE

James Gibson III (victim) had 23 years of experience operating a dozer in various industries. Gibson’s first day on the job for the contractor was the day the accident occurred. A representative of MSHA's Educational Field Services staff conducted a review of the mine operator's and contractor’s training plans and records. The required training for Gibson and all other training records reviewed were up to date and in compliance with 30 CFR Part 46 requirements. The training records indicated Gibson had received 8.5 hours of new miner training and site-specific hazard awareness training on March 9, 2014. On the day of the accident, Gibson was in the process of receiving task training on the John Deere 750C dozer that he was operating.

ROOT CAUSE ANALYSIS

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

Root Cause: Contractor management did not ensure that the victim maintained control of the dozer at all times.

Corrective Action: Contractor management established procedures to ensure that mobile equipment operators maintain control of dozers at all times while operating them in the pit. The procedures require that dozer operators do not use higher speed transmission settings within the pit thus restricting their speed. The dozers are now restricted from traveling directly over the berms. All mobile equipment operators were trained regarding the new procedures.

***Root Cause*:** Contractor management policies, procedures, and controls did not ensure the victim wore his seat belt when operating the dozer.

***Corrective Action*:** Contractor management developed a new policy regarding requiring the use of seat belts. All mobile equipment operators received additional training regarding the required use of seat belts when operating mobile equipment. Contract management will monitor all equipment operators, including dozer operators, to ensure seat belts are worn.

CONCLUSION

The accident occurred due to contractor management's failure to ensure that the victim maintain control of the dozer at all times while he was operating it. Additionally, contractor management did not ensure that the victim wear a seat belt at all times while operating the dozer.

ENFORCEMENT ACTIONS

Issued to Big River Industries

Order No. 8771991 - Issued on April 24, 2014, under the provisions of section 103(j) of the Mine Act. This order was modified to section 103(k) of the Mine Act when the first Authorized Representative arrived on the mine site.

> *An accident occurred at this operation on April 24, 2014 at approximately 17:35. 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 of causes of the accident. It prohibits all activity on the Northwest corner of new ground of the new clay pit within the established barriers in place until MSHA has determined that it is safe to resume normal mining operations in this area. This order was initially issued orally to the mine operator at 18:37 on April 24, 2014 and has been reduced to writing.*

Issued to Craig Neal and Sons, LLC

Citation No. 8680887 - Issued under the provisions of section 104(a) of the Mine Act for a violation of 30 CFR 56.14130(g):

> *A fatal accident occurred on April 24, 2014, when a dozer over traveled a berm and went into a drainage ditch. The victim was not wearing a seatbelt. This condition allowed the victim to exit the dozer upon impact. The victim had been operating the machine for about 10 hours at the time of the accident. The Operator/Contractor failed to ensure that seatbelts were being worn at all times.*

Citation No. 8680888 - Issued under the provisions of 104(a) of the Mine Act for a violation of 30 CFR 56.9101:

> *A fatal accident occurred on this mine site on April 24, 2014, when the operator of the John Deere 750C dozer serial number TC750CX923459 failed to maintain control and traveled over a berm and into a ditch. This condition exposed the victim to fatal injuries when the accident occurred.*

Approved: _____ Date: _____

Michael D. Davis
District Manager

APPENDIX A
Persons Participating in the Investigation

Big River Industries

Brian Dowden	Vice-President of Operations
Greg Knight	COO
Kim Stonecash	EHS Manager

Craig Neal and Sons, LLC

Jarrod Neal	Co-owner
Michael Neal	Co-owner

Doggett Machinery Services

Paul Marcantel	Mechanical Technician
Troy Ottmer	Vice- President Fixed Operations

John Deere

David Harsha	Territory Customer Support Manager

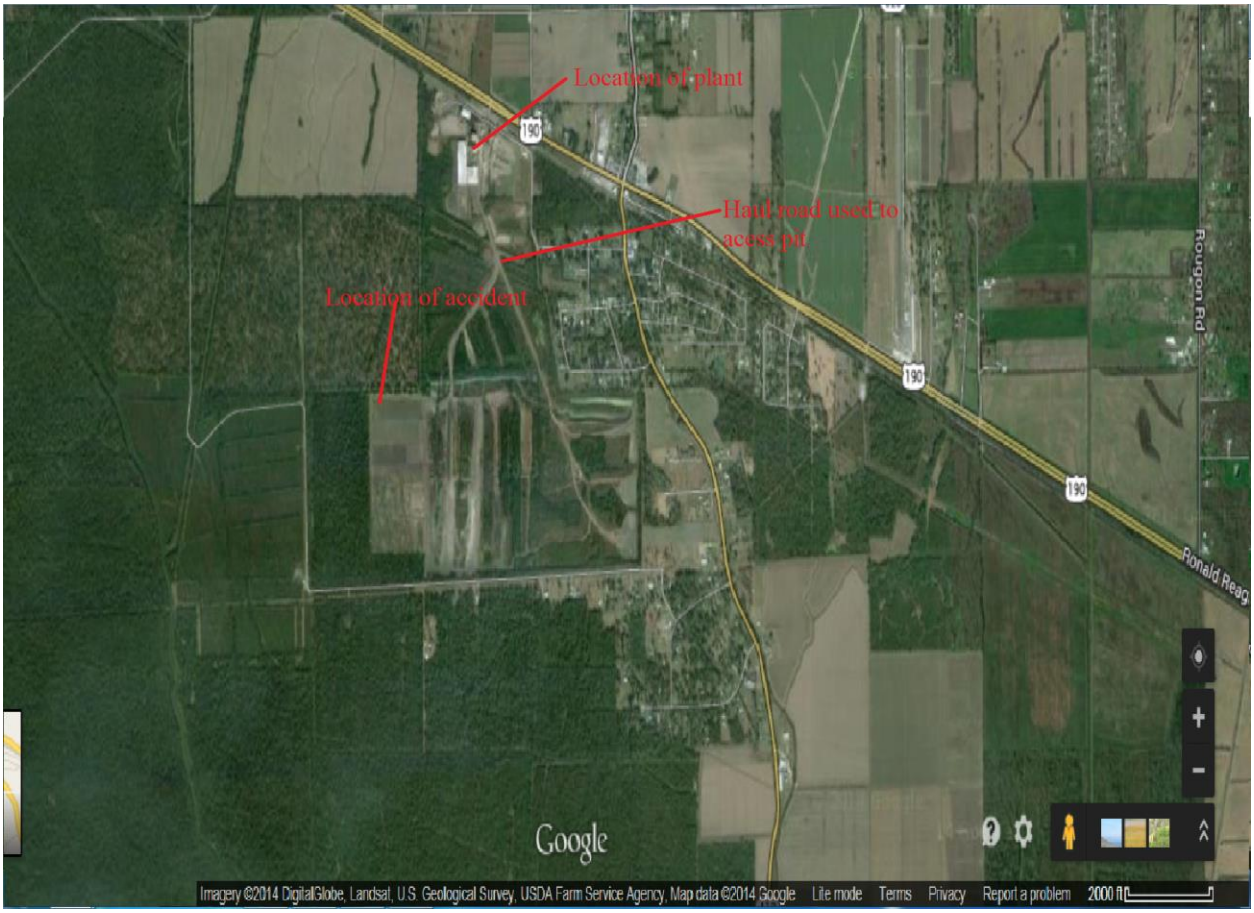
Mine Safety and Health Administration

Fred T. Marshall	Mechanical Engineer
Gerald Oubre	Mine Safety and Health Inspector
Michael R. Van Dorn	Supervisory Mine Safety and Health Inspector

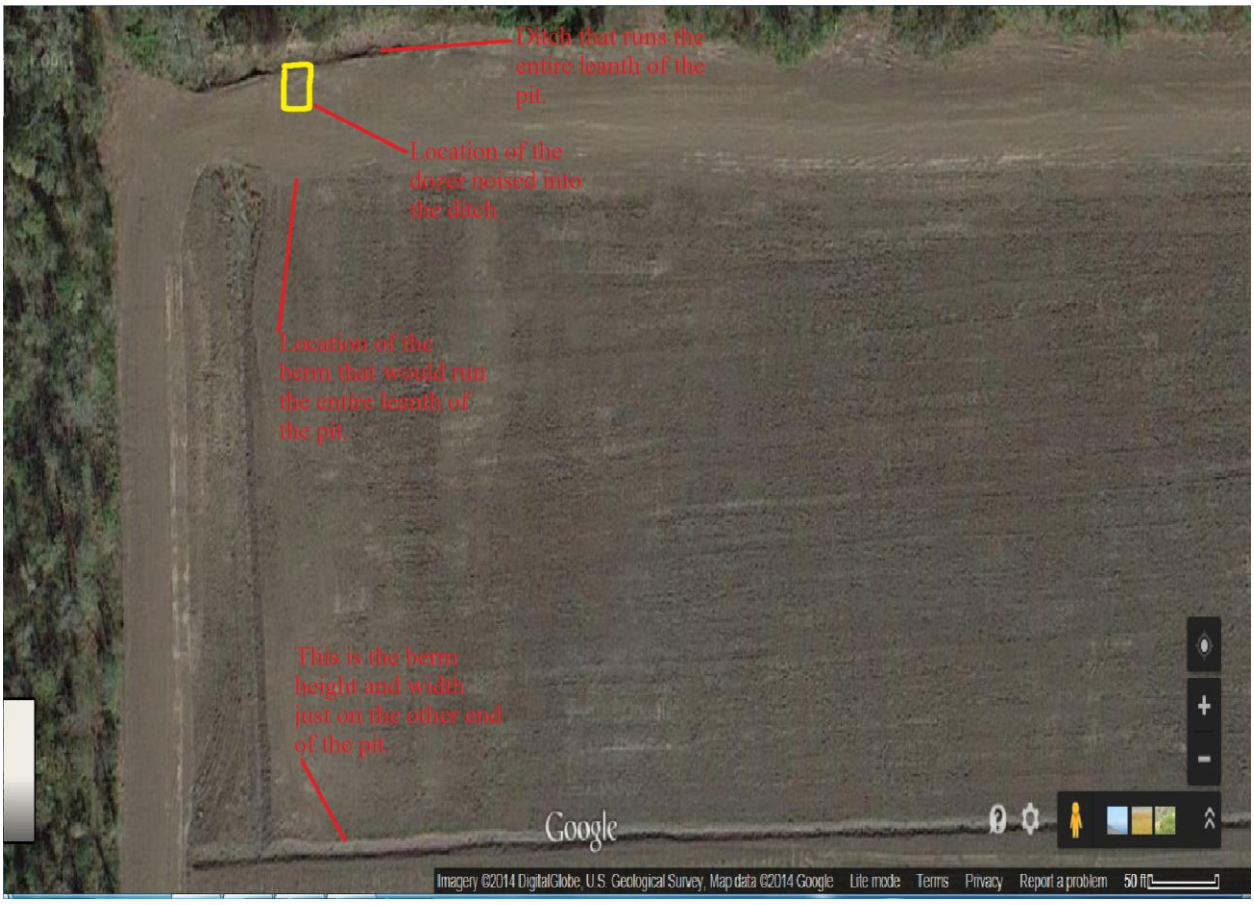
Appendix B

MAPS OF AREA

Map showing location of pit, plant and haul road.



Map of dozer location after the accident, location of the ditch that runs the entire length of the pit, and location of where the berm was on the day of the accident.



Accident Investigation Data - Victim Information

Event Number: 6 6 5 3 0 4 4

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:
James Gibson II!	*M*	*50*	*01 Fatal*

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 04/24/2014 b.Time: 18:13	*a. Date: 04/24/2014 b.Time: 17:30*

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
168 Bulldozer operator	*047 Operating Bulldozer*	Yes X No

10. Experience	Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days
a. This Work Activity:	*23*	*3*	*0*	b. Regular Job Title:	*0*	*0*	*1*	c: This Mine:	*0*	*0*	*1*	d. Total Mining:	*0*	*0*	*1*

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
076 Bulldozer	*170 Crushing injuries to the torso*

13. Training Deficiencies:
Hazard: | New/Newly-Employed Experienced Miner: | Annual: | Task:

14. Company of Employment: (If different from production operator)
Craig Neal and Sons
Independent Contractor ID: (if applicable) *H869*

15. On-site Emergency Medical Treatment:
Not Applicable: | First-Aid: | CPR: | EMT: | Medical Professional: | None:

16. Part 50 Document Control Number: (form 7000-1)
17. Union Affiliation of Victim: