MAI-2017-10

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

REPORT OF INVESTIGATION

Surface Non-Metal Mine
(Crushed, Broken Stone)

Fatal Machinery Accident
October 17, 2017

at

Fighting Creek Materials Inc. Mine
Fighting Creek Materials, Inc.
Coeur d'Alene, Kootenai County
Mine ID No. 10-01915

Investigators

Troy Van Wey
Supervisor Mine Safety and Health Inspector

Thomas Rasmussen
Mine Safety and Health Inspector

Kelly Grof
Mine Safety and Health Inspector

Originating Office

Mine Safety and Health Administration
Western District
991 Nut Tree Road
Vacaville, CA 95687

John Pereza, Acting District Manager

OVERVIEW

On October 17, 2017, Arthur Brand (owner), was fatally injured while descending the top of the North Pit rock bench in a Caterpillar D8H dozer. Brand was ejected from and run over by the dozer which continued to travel across the bench and over the highwall.

The accident occurred because the operator had inadequate policies and procedures in place to ensure that equipment operators wear seat belts in order to maintain control of equipment.

GENERAL INFORMATION

The Fighting Creek Materials Mine is a surface crushed stone operation owned and operated by Fighting Creek Materials, Inc. It is located in Kootenai County, 15 miles south of Coeur D'Alene, Idaho. Arthur Brand, the victim, was president of the company, and Stephanie Brand is vice president. The mine operates one shift, ten hours a day, five days a week. There are six miners employed at this operation.

The operator drilled and blasted basalt rock and used a dozer to push the rock down to the pit floor. The operator used excavators and haul trucks to remove the material from the pit and transport it to the dump hopper where it was then transported, via conveyor belt, to the crushing and screening plant. The operator crushed, dry screened and separated the material into fines, chips, road base and custom products. The finished material was loaded into trucks and transported off site for use in construction.

The Mine Safety and Health Administration (MSHA) completed the last regular inspection of this operation on March 29, 2017.

DESCRIPTION OF ACCIDENT

On Tuesday, October 17, 2017, Arthur Brand began work at the normal starting time of 7:00 a.m. The day started with the crew in the mine office for the daily shift meeting. Brand gave direction to the crew for the day's activities. At 7:15 a.m., the crew left the office to start and prepare the plant to begin crushing and screening activities. Brand conducted administrative work in the office, and then left the mine site to pick up a load of gasoline in Coeur D'Alene.

Shortly after Brand returned to the mine, he entered the mine office and informed Stephanie Brand and Laurel Bethune, administrative assistant, which he intended to travel to the pit and push material down from the highwall to the pit floor with the dozer. He traveled to the pit floor, retrieved a Caterpillar D8H dozer, and began tracking the dozer up the access road towards the top of the North Pit. Rob Lockridge, front-end loader operator, was on the pit floor stockpiling processed material and loading trucks. Lee Peone, excavator operator, was stockpiling feed material near the south toe of the highwall. Both Lockridge and Peone observed Brand tramming the dozer up the access road about 9:55 a.m.

At 10:07 a.m., Lockridge noted he had not seen any material come down from the highwall, so he drove the loader to where he could see the top of the bench. Lockridge observed the upside down dozer on the pit floor and immediately went to investigate. Lockridge did not see Brand in the dozer and at 10:08 a.m. reported over the CB radio that the dozer was upside down. As Brian Jakes, a customer truck driver, was entering the mine, he heard Lockridge's radio call and proceeded into the pit to assist. Bethune, who was trained in first aid, left the mine office and traveled to the pit area, as well. Lockridge, Jakes and Peone searched the area around the dozer on the pit floor and did not find Brand. Lockridge and Jakes went to the top of the highwall and followed the dozer tracks down the overburden slope. Jakes located Brand on the ground approximately half way across the 60-foot wide bench, where the dozer's left track ran over and killed Mr. Brand. After Peone arrived on the bench, Jakes and Lockridge blocked the entrance to

the accident scene to prevent other personnel from entering the area and waited for emergency medical services to arrive.

After hearing the initial radio call, Stephanie Brand called 911 at 10:09 a.m., and Worley Fire Department dispatched emergency medical services. Records indicated personnel from the Kootenai County Sheriff's Office arrived on site at approximately 10:22 a.m.

INVESTIGATION OF ACCIDENT

Laurel Bethune called the Department of Labor National Contact Center (DOLNCC) at 10:45 a.m. on October 17, 2017, to notify MSHA of the accident. DOLNCC notified James Fitch, safety specialist in MSHA's Western District. MSHA issued an order under provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and began the investigation.

MSHA's accident investigation team traveled to the mine, inspected the accident scene, interviewed employees, and reviewed policies and procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management, employees, contractors and the Kootenai County Sheriff's Office.

DISCUSSION

Location of the Accident

The accident occurred on the Brown Rock Bench in the North Pit. The North Pit consisted of a 58 feet high single bench, topped with a layer of clay-rich overburden varying in thickness up to 20 feet. Miners removed the overburden to expose the basalt rock for a distance of 60 feet from the west edge of the bench. A single trail provided dozer access from the top of the highwall to the cleared and stripped portion of the bench (Appendix C-1). A large pile of broken basalt had been collected from the area and placed on the south end of the bench to be pushed down from the highwall.

At the transition point between the remaining overburden slope and the bench, there was a near vertical drop that varied from 3 ½ to 5 ½ feet high (Appendix C-2). Investigators found no indication the dozer pushed material in front of the blade while descending the slope (Appendix C-3). Based on the findings, investigators concluded Brand had the blade up to prevent clay material from contaminating the basalt. The dozer pitched forward when the vertical drop was encountered and Brand was thrown in front of the dozer since he was not wearing his seat belt. Investigators believe if Brand had been wearing his seat belt, he could have remained in control of the dozer.

Equipment involved in the accident

The equipment involved in the accident was a 1967 track-type Caterpillar D8H dozer, serial number 46A16754. A seat belt would not have been installed at the factory for this model year dozer. A seat belt assembly was installed at some later date. The dozer was equipped with an

open cab and a 13 foot 8 inch wide, semi-u push blade on the front and a single shank ripper on the rear, and weighed approximately 80,000 pounds with its attachments. The dozer landed upside down, with the blade pointing toward the highwall. Impact marks made by the blade were noted about two thirds of the way down the crest leading the investigators to believe the dozer went upside down at that point.

Falling over the highwall caused extensive damage to the dozer, including crushing the roof of the operator compartment, buckling and breaking several floor plates, and tearing the operator's seat away from its base. The operating controls were checked. All operating controls were in position for investigators to conclude that the dozer was being driven at the time of the accident. The investigators checked the seat belt and found it unbuckled. It did not appear to have been in use at the time of the accident. When investigators tested the seat belt after the accident, they found it fastened correctly and held in place when pressure was applied. During interviews with employees, the investigators found there was not a mandatory seat belt use policy in place and the victim had refused to wear the seat belt in the past.

No defects were found on the drive assemblies. Investigators found the dozer tracks to be in good repair and found no broken treads, pins or trace bolts on the dozer or its grousers. The operator provided examination and repair records, which showed no indication of mechanical defects or incomplete maintenance items on the dozer.

Weather

Weather reports at the time of the accident indicated mostly sunny skies with light winds and a temperature of approximately 55 degrees Fahrenheit. Weather was not a factor in the accident.

Training and Experience

Mr. Brand operated bulldozers for 60 years, and at this mine for approximately 30 years. A representative of MSHA's Educational Field and Small Mine Services (EFSMS) staff conducted a review of the operator's training plan and records; EFSMS determined the training plan and records to be in compliance with MSHA Part 46.

ROOT CAUSE ANALYSIS

MSHA conducted a root cause analysis and identified the following root cause:

Root Cause: Inadequate policies and work procedures did not ensure that seat belts were worn when employees operated self-propelled mobile equipment in order to maintain control of moving equipment.

Corrective Action: The mine owner died and the mine closed.

CONCLUSION

Arthur Brand was run over and killed when he lost control of the Caterpillar D8H dozer he was operating. Brand was not wearing his seat belt when he encountered a vertical drop and was thrown in front of the dozer track. The accident occurred because the operator had inadequate policies and procedures in place to ensure that equipment operators wear seat belts in order to maintain control of equipment.

ENFORCEMENT ACTIONS

Issued to Fighting Creek Materials, Inc.

Order No. 8998553 was issued under the provisions of section 103(k) of the Mine Act:

A fatal accident occurred at this operation when a miner was thrown from the dozer he was operating in the Fighting Creek Pit. This order is issued to assure the safety of all persons at this operation. It prohibits all activity at the Fighting Creek Pit and Plant areas. This encompasses the areas north of the access bridge. The mine operator shall obtain prior approval from an authorized representative for all actions to recover and/or restore operations to the affected area.

This order was terminated after conditions contributed to the accident no longer existed.

Citation No. 9371441 was issued on November 13, 2017, under provisions of Section 104(a) of the Mine Act for a violation of 56.9101:

On October 17, 2017, a fatal accident occurred at this mine when the dozer operator lost control of the dozer he had been operating. The dozer was tracking down the 20 to 35 degree variable clay-rich overburden slope to the top of the bench in the North Pit with both the blade and ripper on the CAT D8H dozer in the raised position. The dozer traveled over an uneven, near vertical drop-off ranging about 3 ½ to 5 ½ feet tall from the overburden slope onto the clean basalt bench and the operator was ejected from the open cab dozer. The Mine Operator was operating the dozer and failed to maintain control of the machine while it was in motion.

Approved: _____ *Date:* _____

John Pereza
Acting District Manager

Appendix A

Persons Participating in the Investigation
(Persons interviewed are indicated by a * next to their name)

Fighting Creek Materials, Inc.
*Stephanie Brand, Vice President
*Laurel Bethune, Administrative Assistant
*Rob Lockridge, Front end loader operator
*Charles Peone, Excavator operator
*Lee Peone, Excavator operator
*Barry Allen, Plant Operator

Coeur D'Alene Crane
*Loren Rohrbach

Kootenai County Sheriff's Office
*Jerry Northrup, Detective

Mine Safety and Health Administration
Troy Van Wey, Field Office Supervisor
Thomas Rasmussen, Mine Safety and Health Inspector
Kelly Grof, Mine Safety and Health Inspector
Philip Dahl, Educational Field and Small Mine Services Training Specialist

Persons interviewed during investigation
*Brian Jakes – Independent customer truck driver
*Barry Klins, Independent Contract Mechanic - Perfection Machine

Appendix B

Accident Investigation Data - Victim Information

Event Number: 6 7 2 5 9 0 6

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:
Arthur R. Brand	*M*	*73*	*01 Fatal*

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 10/17/2017 b.Time: 10:09	*a. Date: 10/17/2017 b.Time: 7:00*

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
199 Mine Owner/ President	*047 Operating bulldozer*	Yes X No

10. Experience	a. This Work Activity:	b. Regular Job Title:	c: This Mine:	d. Total Mining:
Years	*60*	*30*	*30*	*30*
Weeks	*0*	*0*	*0*	*0*
Days	*0*	*0*	*0*	*0*

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
105 Bulldozer/crawler tractor	*170 Crushing injuries*

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: | EMT: | Medical Professional: | None: X

16. Part 50 Document Control Number: (form 7000-1) *220172990003* 17. Union Affiliation of Victim: *9999* *None (No Union Affiliation)*

Appendix C

Attachment # C-1 (Downhill view of dozer trail from top of overburden slope looking west onto brown rock bench.)

Attachment # C-2 (Downhill view from dozer trail looking west across transition between overburden and cleared bench)

Attachment # C-3 (Downhill view from bench looking south across transition between overburden and cleared bench where D8H traveled across)