MAI-2007-25

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

REPORT OF INVESTIGATION

Surface Nonmetal Mine
(Sand and Gravel)

Fatal Powered Haulage Accident
September 20, 2007

Conrock North Pit
Wilder Construction Company
Palmer, Matanuska-Susitna County, Alaska
Mine I.D. No. 50-01282

Investigators

Stephen A. Cain
Supervisory Mine Safety and Health Inspector

Melvin K. Palmer
Mine Safety and Health Specialist

Originating Office
Mine Safety and Health Administration
Western District
2060 Peabody Road, Suite 610
Vacaville, California 95687
Arthur L. Ellis, District Manager

Photograph of Accident Scene

Head Pulley Area of #13 Conveyor

OVERVIEW

Rickey A. Meshew, plant laborer, age 49, was fatally injured on September 20, 2007, when he became entangled in a belt conveyor take-up pulley at the wash plant. Meshew entered the area to shovel spillage. He gained access to the take up pulley through the conveyor frame work.

The accident occurred because the procedures to safely remove spillage were not followed. The belt conveyor was not de-energized and blocked against motion prior to persons entering the area. Failure to recognize the hazard of performing work near moving machine parts contributed to the accident.

GENERAL INFORMATION

Conrock North Pit, a surface sand and gravel operation, owned and operated by Wilder Construction Company, was located at Palmer, Matanuska-Susitna County, Alaska. The principal operating official was Trevor Edmondson, general manager. The mine normally operated one, 8-10 hour shift per day, 6 days a week. Total employment was 20 persons.

Material was mined with a dredge and then crushed, screened, washed, and stockpiled by belt conveyors. The finished products were sold for use as construction aggregate.

The last regular inspection of this operation was completed on August 2, 2007.

DESCRIPTION OF ACCIDENT

On the day of the accident, Rickey A. Meshew (victim), reported for work at 7:00 a.m., his normal starting time. This was his second day of work at the mine. Derek Barickman, supervisor, held a safety meeting at the beginning of the shift with all of the employees, including Meshew, to discuss lock-out/tag-out procedures.

After the meeting, Barickman instructed John Martinez, mechanic, to escort Meshew to the wash plant and show him the areas that needed cleaned up. Later that morning, Barickman met Meshew and pointed out areas around the #13 belt conveyor where material had accumulated that needed to be removed.

About 10:00 a.m., Barickman saw Meshew using a skid steer loader to clean the #13 belt conveyor. Meshew had lunch at the crusher area with the other employees at noon. Barickman told him to continue cleaning up around the #13 belt conveyor. Meshew had not removed any of the guards while cleaning the conveyor area.

At 12:20 p.m., Barickman shut down the crusher portion of the plant to perform maintenance. The wash plant and associated conveyors continued to operate because the crusher portion operated separately from the wash plant. Barickman and Meshew met at the crusher area and then Meshew returned to the wash plant.

Barickman performed maintenance on the crusher until approximately 4:00 p.m. when he began start-up procedures for the crusher. Barickman didn't see Meshew, so he went to the wash plant and discovered the victim lying on the ground under the take up-pulley of the #13 belt conveyor. Meshew was found inside of the frame work of the conveyor support structure along with the shovel he had been using to clean the area.

Barickman immediately called Jack Kerslake, pit superintendent, who then called for emergency medical assistance. Meshew was pronounced dead by the Susitna County deputy sheriff. The cause of death was attributed to blunt force trauma.

INVESTIGATION OF THE ACCIDENT

The Mine Safety and Health Administration (MSHA) was notified of the accident at 4:27 p.m. on September 20, 2007, by a telephone call from Chuck Wilkes, environmental and safety technician, to Diane Watson, acting assistant district manager. An investigation began on the same day. An order was issued pursuant to section 103(k) of the Mine Act to ensure the safety of the miners.

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

DISCUSSION

Location of the Accident

The accident occurred at the take-up pulley of the #13 belt conveyor located at the wash plant area of the mine.

Belt conveyor

The belt conveyor involved in the accident was 107 feet long, 48 inches wide, and traveled about 442 feet per minute. The take-up pulley on the conveyor belt was 12 inches in diameter, 51 inches long, and positioned 65 inches above ground level. Expanded metal guards were positioned on each side of the conveyor belt to prevent contact with the take-up pulley. The electrical control system was inspected, tested, and found to be functioning properly.

Weather Conditions

On the day of the accident, the weather was sunny with a temperature of approximately 45 degrees Fahrenheit. Weather was not considered to be a factor in the accident.

Training and Experience

Rickey A. Meshew had 32 years mining experience and had worked at this mine for 2 days. He had received training in accordance with 30 CFR, Part 46.

ROOT CAUSE ANALYSIS

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

Causal Factor: The procedures and controls to remove spillage around belt conveyors were not followed. The belt conveyor was not de-energized and blocked against hazardous motion before persons removed spillage.

Corrective Action: Persons removing spillage around belt conveyors should be trained to de-energize and block conveyor belts against hazardous motion before any work is performed. Persons should be thoroughly trained to recognize identifiable hazards before any work begins and ensure steps are taken to safely perform the task.

CONCLUSION

The accident occurred because the procedures to safely remove spillage were not followed. The belt conveyor was not de-energized and blocked against motion prior to persons entering the area. Failure to recognize the hazard of performing work near moving machine parts contributed to the accident.

ENFORCEMENT ACTIONS

Order No. 6308228 was issued on September 20, 2007, under Section 103(k) of the Mine Act:

> A fatal accident occurred at this operation on September 20, 2007, when a miner became entangled in a take-up pulley on the #13 conveyor belt. This order is issued to assure the safety of all persons at this operation. It prohibits all activity at the #13 conveyor belt until MSHA has determined that it is safe to resume normal operations in the area. 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 on September 26, 2007, after conditions that contributed to the accident no longer existed.

Citation No. 6398237 was issued on November 20, 2007, under the provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 56.14105:

> A fatal accident occurred at this mining operation on September 20, 2007, when a laborer was drawn into a moving take-up pulley. Maintenance was being performed with the power on, the equipment running, and without blocking it against hazardous motion.

This citation was terminated on November 20, 2007. Policies and procedures were reviewed with all mine employees. The training included lock-out/tag-out and blocking equipment prior to performing maintenance work or making repairs near moving parts.

Approved By:

_____ _____

Arthur L. Ellis Date
District Manager

Appendices

Appendix A

Persons Participating in the Investigation

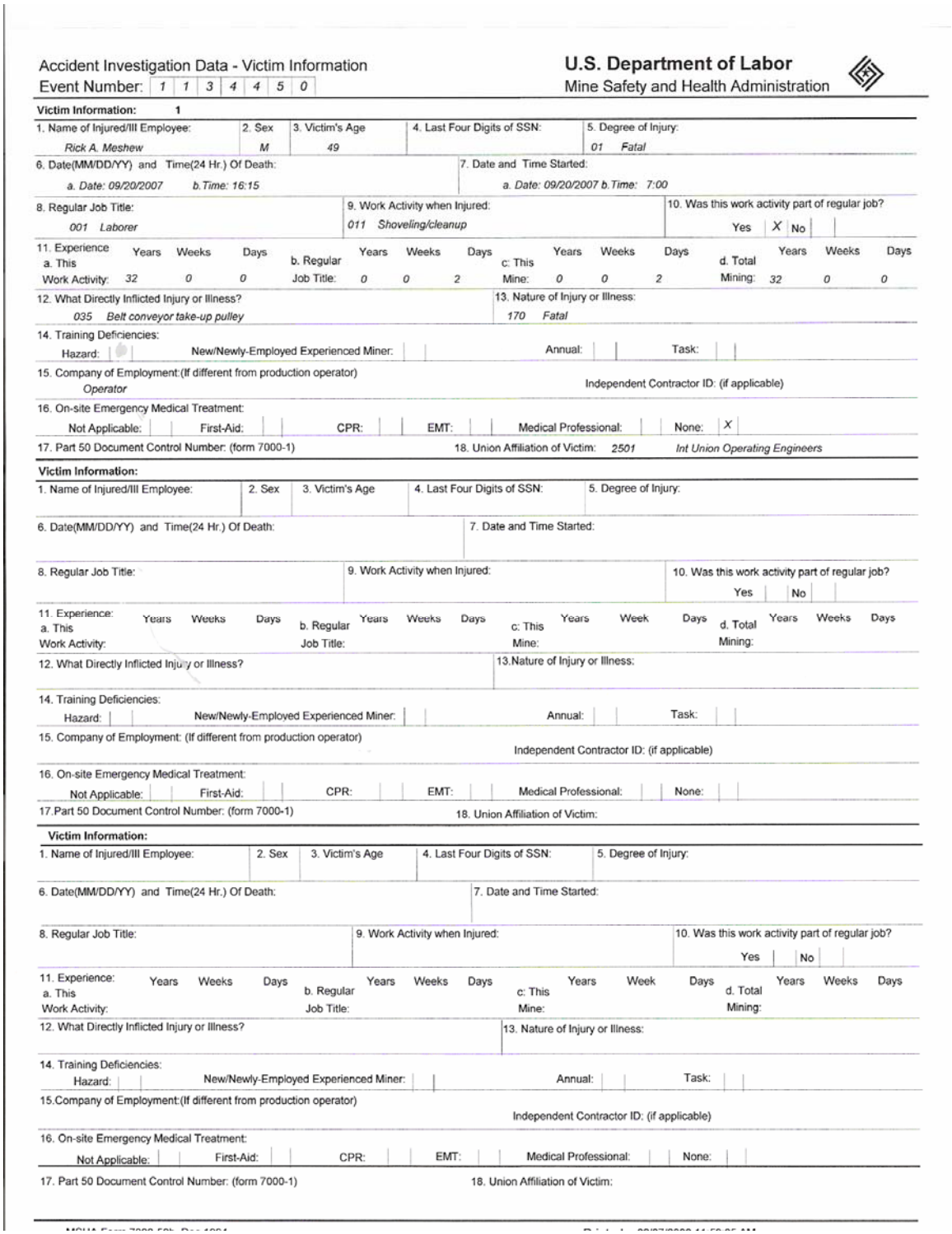
Wilder Construction Company

Jack Kerslake.....pit superintendent
Chuck Wilkes .....environmental and safety technician
Ian Langtry.....division safety manager

Mine Safety and Health Administration

Stephen A. Cain.....supervisory mine safety and health inspector
Melvin K. Palmer……..mine safety and health specialist

Appendix B



Accident Investigation Data - Victim Information
Event Number: 1 1 3 4 4 5 0

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. Last Four Digits of SSN:	5. Degree of Injury:
Rick A. Meshew	M	49		01 Fatal

6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: 09/20/2007 b.Time: 16:15

7. Date and Time Started: a. Date: 09/20/2007 b.Time: 7:00

8. Regular Job Title: 001 Laborer

9. Work Activity when Injured: 011 Shoveling/cleanup

10. Was this work activity part of regular job? Yes X No

11. Experience	Years	Weeks	Days
a. This Work Activity:	32	0	0
b. Regular Job Title:	0	0	2
c: This Mine:	0	0	2
d. Total Mining:	32	0	0

12. What Directly Inflicted Injury or Illness? 035 Belt conveyor take-up pulley

13. Nature of Injury or Illness: 170 Fatal

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

15. Company of Employment:(If different from production operator) Operator

Independent Contractor ID: (if applicable)

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

17. Part 50 Document Control Number: (form 7000-1)

18. Union Affiliation of Victim: 2501 Int Union Operating Engineers

Victim Information:

1. Name of Injured/Ill Employee:	2. Sex	3. Victim's Age	4. Last Four Digits of SSN:	5. Degree of Injury:

6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:

7. Date and Time Started:

8. Regular Job Title:

9. Work Activity when Injured:

10. Was this work activity part of regular job? Yes | No

11. Experience:	Years	Weeks	Days
a. This Work Activity:			
b. Regular Job Title:			
c: This Mine:		Week	
d. Total Mining:			

12. What Directly Inflicted Injury or Illness?

13.Nature of Injury or Illness:

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

15. Company of Employment: (If different from production operator)

Independent Contractor ID: (if applicable)

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

17.Part 50 Document Control Number: (form 7000-1)

18. Union Affiliation of Victim:

Victim Information:

1. Name of Injured/Ill Employee:	2. Sex	3. Victim's Age	4. Last Four Digits of SSN:	5. Degree of Injury:

6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:

7. Date and Time Started:

8. Regular Job Title:

9. Work Activity when Injured:

10. Was this work activity part of regular job? Yes | No

11. Experience:	Years	Weeks	Days
a. This Work Activity:			
b. Regular Job Title:			
c: This Mine:		Week	
d. Total Mining:			

12. What Directly Inflicted Injury or Illness?

13. Nature of Injury or Illness:

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

15.Company of Employment:(If different from production operator)

Independent Contractor ID: (if applicable)

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

17. Part 50 Document Control Number: (form 7000-1)

18. Union Affiliation of Victim: