

MAI-2008-21

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

REPORT OF INVESTIGATION

Surface Metal Mine
(Copper)

Fatal Fall of Material Accident
October 29, 2008

Ames Construction Inc.
Contractor ID No. U82

and

Bob Orton Trucking
Contractor ID No. V856

at

Copperton Concentrator
Kennecott Utah Copper Corp.
Magna, Salt Lake County, Utah
Mine ID No. 42-01996

Investigators

Shane P. Julien
Mine Safety and Health Inspector

Phillip L. McCabe
Mechanical Engineer

Originating Office
Mine Safety and Health Administration
Rocky Mountain District
PO Box 25367 DFC
Denver, CO 80225-0367
Richard Laufenberg, District Manager

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OVERVIEW

William L. Kay, delivery truck driver, age 81, was fatally injured on October 29, 2008. Kay was unfastening a load of pipe from a flatbed trailer when one 50-foot section of pipe rolled off and struck him. He was preparing to unload nine sections of pipe from the trailer.

The accident occurred because contractor management policies and controls were inadequate and failed to ensure that the truck load of pipe was unloaded in a manner that did not create a hazard to persons.

Initial position of pipe



Victim location

GENERAL INFORMATION

Copperton Concentrator, a surface copper mine facility, owned and operated by Kennecott Utah Copper Corp., was located in Bingham Canyon, Salt Lake County, Utah. The principal operating official was Andrew Harding, chief executive officer. The facility employed 782 persons working two, 12-hour shifts, 7 days a week.

Copper ore was drilled, blasted, and transported by conveyor to the concentrator for processing. The finished products were sold to commercial industries.

Ames Construction, Inc., located in West Valley, Utah, was contracted by Kennecott Utah Copper Corp., to maintain the mine tailings (waste) area. The principal operating official was Doug Lunsford, superintendent.

Bob Orton Trucking, located in Panguitch, Utah, was contracted by WL Plastics, Inc., to deliver several hundred feet of 28" high-density polyethylene (HDPE) pipe from Cedar City, Utah to the mine. The principal operating official was Bob Orton, owner. The pipe was to be used for an ongoing tailings maintenance project.

The last regular inspection at this operation was completed on July 17, 2008.

DESCRIPTION OF ACCIDENT

On the day of the accident, William L. Kay (victim) arrived at the mine at 7:30 a.m. with a truck load of pipe. Kay checked in at the mine office and met three employees, James Hilton, Greg Davis, and Juan Florez, miners of Ames Construction. Hilton, Davis, and Florez traveled in a service truck to escort Kay's truck to the pipe stockpile at the mine tailings area where the pipe was to be unloaded.

After arriving at the pipe stockpile, Davis and Hilton went to the shop to get a forklift to unload the pipe from the flatbed trailer. Kay remained at the pipe stockpile area and Florez went to a nearby restroom. Florez returned to the area and observed Kay retrieving tools from a toolbox located near the truck's cab.

About 7:50 a.m., Florez walked to a pile of wooden timbers located on the opposite (passenger) side of the truck. Florez did not realize that Kay stayed on the driver's side of the truck and began loosening nylon ratchet-type load straps that were securing the load of pipe to the trailer. Shortly after that, Florez heard wood breaking and the pipe hitting the ground.

He went to the back of the trailer and saw Kay lying on the ground. Florez contacted Doug Lunsford, superintendent, to report the accident. An emergency response team from Kennecott Utah Copper Corp. was dispatched to the scene. Efforts to resuscitate Kay were unsuccessful and he was pronounced dead at the scene by the Salt Lake County Coroner. Death was attributed to blunt force trauma.

INVESTIGATION OF ACCIDENT

The Mine Safety and Health Administration (MSHA) was notified of the accident at 8:15 a.m., on October 29, 2008, by a telephone call from Jacob Rukavina, senior safety and health advisor, to MSHA's emergency call center. Ronald Pennington, supervisory special investigator, was notified and an investigation was started the same day. An order was issued under the provisions of 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 scene, interviewed employees, and reviewed documents and work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine and contractor management and employees and the Utah Highway Patrol.

DISCUSSION

Location of the Accident

The accident occurred at the tailings pipe stockpile, located on the north side of the tailings ponds. The victim's truck was parked facing east on relatively dry and level ground.

Weather

The weather at the time of the accident was mostly clear with a slight westerly wind and a temperature of 41 degrees Fahrenheit. Weather was not considered to be a factor in the accident.

High Density Polyethylene Pipe

The High Density Polyethylene (HDPE) plastic pipe was used to convey liquids and waste material at the tailings ponds. The 1-¾ inch thick wall pipe had a 28-inch outside diameter. Each pipe section was 50 feet long and weighed 3,000 pounds. The pipe that struck the victim was positioned on the trailer 12 feet above the ground.

A typical trailer load of pipe consisted of nine sections arranged in three rows of three sections each. Two pipe sections in each row were banded together by the manufacturer. Three 2-¼ inch by 3-inch wooden timbers, referred to as dunnage, were placed between each row of pipe to provide stabilization. Chock blocks were typically provided to prevent the sections of pipe from rolling.

However, none of the wooden timbers on the trailer involved in the accident were provided with chock blocks. The load of pipe was secured to the trailer with several nylon ratchet-type straps each rated for 12,000 pounds of weight.

Truck and Trailer Information

The Kenworth tractor involved in the accident was an over-the-road truck. The Ravens trailer was an over-the-road flatbed semi trailer. The truck and trailer were of the type commonly used on public highways.

After the accident the Utah Highway Patrol, Motor Carrier Division, inspected the truck and trailer. Violations were found for insufficient load tie-downs, no means to prevent cargo from rolling, and an inoperable reverse lamp.

Loading and Unloading Procedures

Two different warning labels were attached to the pipe specifying instructions for the proper handling and transportation of the pipe. However, these instructions for unloading the pipe were not followed. Typically, a forklift would be used to unload the pipe. The operator of the forklift would position the forks under a row of pipe to prevent movement and then the nylon straps would be released. On the day of the accident, the nylon straps were removed prior to positioning the forklift. The chocks normally located on the dunnage to prevent the pipe from rolling were not provided.

Training and Experience

William L. Kay, victim, had 55 years of over-the-road truck driving experience. He had delivered one load of pipe to the mine two days prior to the accident. Kay had received training in accordance with 30 CFR, Part 48. However, the training record was unavailable and a non-contributory citation was issued.

Greg Davis, miner, had 8 years of mining experience. Juan Florez, miner, had 1 year of mining experience. James Hilton, miner, had 12 years of mining experience. All three miners had received training in accordance with 30 CFR, Part 48.

ROOT CAUSE ANALYSIS

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

Root Cause: Contractor management policies and work procedures were inadequate and failed to ensure that a truck load of pipe was unloaded in a manner that did not create a hazard to persons.

Corrective Action: Contractor management should establish policies and controls to ensure that pipe can be unloaded from trucks in a manner that does not create a hazard to persons.

CONCLUSION

The accident occurred because contractor management policies and controls were inadequate and failed to ensure that the truck load of pipe was unloaded in a manner that did not create a hazard to persons.

ENFORCEMENT ACTIONS

Issued to Kennecott Utah Copper Corp.

Order No. 6320219 was issued on October 29, 2008, under the provisions of Section 103(k) of the Mine Act.

A fatal accident occurred at this operation on October 29, 2008, when a 50-foot section of HDPE pipe fell off a truck onto a miner. This order is issued to ensure the safety of all persons at this operation. It prohibits all pipe unloading activity until MSHA has determined that it is safe to resume normal operations. The mine operator shall obtain approval from an Authorized Representative for all actions to recover and/or restore operations to the affected area.

This order was terminated on October 31, 2008, after conditions that contributed to the accident no longer existed.

Issued to Ames Construction Inc.

Citation No. 6328009 was issued on December 11, 2008, under provisions of Section 104(a) of the Mine Act for a violation of 56.9201:

A fatal accident occurred on October 29, 2008, when a delivery truck driver was struck by a section of pipe. The victim had operated a truck containing a supply of pipes which was loaded, transported and unloaded in a manner which were hazardous to persons from falling supplies. The pipes had been inadequately secured and when the victim released the nylon straps one 50-foot section of pipe fell from the flat bed trailer and struck him.

This citation was terminated on December 11, 2008. Persons working in this area have been retrained to load, transport, and unload supplies in a manner that does not create a falling material hazard.

Issued to Bob Orton Trucking

Citation No. 6328010 was issued on December 11, 2008, under provisions of Section 104(a) of the Mine Act for a violation of 56.9201:

A fatal accident occurred on October 29, 2008, when a delivery truck driver was struck by a section of pipe. The victim had operated a truck containing a supply of pipes which was loaded, transported and unloaded in a manner which was hazardous to persons from falling supplies. The pipes had been inadequately secured and when the victim released the nylon straps one 50-foot section of pipe fell from the flat bed trailer and struck him.

This citation was terminated on December 11, 2008. Persons working in this area have been retrained to load, transport, and unload supplies in a manner that does not create a falling material hazard.

Approved by,

Date: January 20, 2009

Richard Laufenberg
District Manager

APPENDICES

APPENDIX A	Persons Participating in the Investigation
APPENDIX B	Diagram of Typical Pipe Configuration on Trailer
APPENDIX C	Victim Data Sheet

APPENDIX A

Persons Participating in the Investigation

Kennecott Utah Copper Corp.

Paula Doughty
Frank Klobchar

tailings manager
safety and health manager

Ames Construction Inc.

Jeff Rocco
Andy Anderson
Doug Lunsford

safety superintendent
Western region safety manager
superintendent

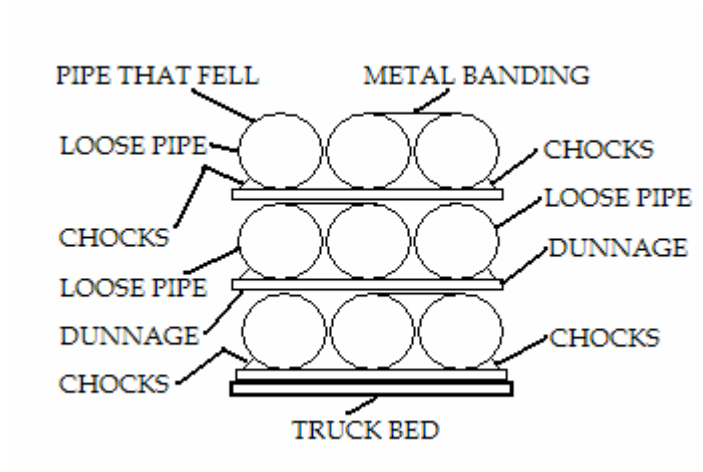
Mine Safety and Health Administration

Shane P. Julien
Phillip L. McCabe

mine safety and health inspector
mechanical engineer

APPENDIX B

Typical pipe configuration on trailer



Note: No chocks were provided on the load of pipe involved in this accident

APPENDIX C

Accident Investigation Data - Victim Information

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



Event Number:

1	0	9	7	8	7	2
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Victim Information: 1

1. Name of Injured/Ill Employee: <i>William L. Kay</i>		2. Sex: <i>M</i>	3. Victim's Age: <i>81</i>	4. Degree of Injury: <i>01 Fatal</i>																											
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: <i>a. Date: 10/29/2008 b. Time: 7:55</i>				6. Date and Time Started: <i>a. Date: 10/29/2008 b. Time: 7:30</i>																											
7. Regular Job Title: <i>076 Over the road truck driver</i>		8. Work Activity when Injured: <i>028 Unloading 3,000 lb pipe sections</i>		9. Was this work activity part of regular job? <table style="width: 100%;"><tr><td style="width: 33%; text-align: center;">Yes</td><td style="width: 33%; text-align: center;"><input checked="" type="checkbox"/></td><td style="width: 33%; text-align: center;">No</td></tr></table>			Yes	<input checked="" type="checkbox"/>	No																						
Yes	<input checked="" type="checkbox"/>	No																													
10. Experience a. This Work Activity: <table style="display: inline-table;"><tr><td style="width: 20px; text-align: center;">Years</td><td style="width: 20px; text-align: center;">Weeks</td><td style="width: 20px; text-align: center;">Days</td></tr><tr><td style="text-align: center;">55</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td></tr></table>		Years	Weeks	Days	55	0	0	b. Regular Job Title: <table style="display: inline-table;"><tr><td style="width: 20px; text-align: center;">Years</td><td style="width: 20px; text-align: center;">Weeks</td><td style="width: 20px; text-align: center;">Days</td></tr><tr><td style="text-align: center;">55</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td></tr></table>		Years	Weeks	Days	55	0	0	c. This Mine: <table style="display: inline-table;"><tr><td style="width: 20px; text-align: center;">Years</td><td style="width: 20px; text-align: center;">Weeks</td><td style="width: 20px; text-align: center;">Days</td></tr><tr><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">1</td></tr></table>		Years	Weeks	Days	0	0	1	d. Total Mining: <table style="display: inline-table;"><tr><td style="width: 20px; text-align: center;">Years</td><td style="width: 20px; text-align: center;">Weeks</td><td style="width: 20px; text-align: center;">Days</td></tr><tr><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">1</td></tr></table>		Years	Weeks	Days	0	0	1
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55	0	0																													
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55	0	0																													
Years	Weeks	Days																													
0	0	1																													
Years	Weeks	Days																													
0	0	1																													
11. What Directly Inflicted Injury or Illness? <i>127 50 ft 3,000 lb HDPE pipe section</i>				12. Nature of Injury or Illness: <i>170 Crushing</i>																											
13. Training Deficiencies: Hazard: <table style="display: inline-table;"><tr><td style="width: 20px; text-align: center;">New/Newly-Employed</td><td style="width: 20px; text-align: center;">Experienced Miner:</td></tr></table> Annual: <table style="display: inline-table;"><tr><td style="width: 20px; text-align: center;">Task:</td></tr></table>							New/Newly-Employed	Experienced Miner:	Task:																						
New/Newly-Employed	Experienced Miner:																														
Task:																															
14. Company of Employment: (If different from production operator) <i>Bob Orton Trucking</i>				Independent Contractor ID: (if applicable) <i>V856</i>																											
15. On-site Emergency Medical Treatment: Not Applicable: <table style="display: inline-table;"><tr><td style="width: 20px; text-align: center;">First-Aid:</td><td style="width: 20px; text-align: center;">CPR:</td><td style="width: 20px; text-align: center;">EMT:</td><td style="width: 20px; text-align: center;"><input checked="" type="checkbox"/></td><td style="width: 20px; text-align: center;">Medical Professional:</td><td style="width: 20px; text-align: center;">None:</td></tr></table>							First-Aid:	CPR:	EMT:	<input checked="" type="checkbox"/>	Medical Professional:	None:																			
First-Aid:	CPR:	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>																											