MAI-2005-20

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface Nonmetal Mine
(Sand and Gravel)

Fatal Powered Haulage Accident
August 1, 2005

Wash Plant #1
Commercial Rock Products
Durango, La Plata County, Colorado
Mine ID No. 05-04646

Investigators

Dale D. Teeters
Mine Safety and Health Inspector

Barbara J. Renowden
Mine Safety & Health Specialist

Originating Office
Mine Safety and Health Administration
Rocky Mountain District
P.O. Box 25367, DFC
Denver, CO 80225-0367
Irvin T. Hooker, District Manager

OVERVIEW

Julian J. Harvey, laborer, age 30, was fatally injured on August 1, 2005, when he contacted a return idler and was caught between the conveyor belt and the idler. The victim was using a shovel to remove clay that had build-up on the return idler while the conveyor belt was in motion.

The accident occurred because standards and controls had not been established to require that the conveyor belt's power was off and to block the belt against hazardous motion before work was performed.

GENERAL INFORMATION

Wash Plant #1, a surface sand and gavel operation, owned and operated by Commercial Rock Products, was located off Highway 160, about three miles east of Durango, La Plata County, Colorado. The principal operating official was Michael Hitti, vice-president. The mine was normally operated one, 8-hour shift a day, five days a week. Total employment was five people.

Sand and gravel was extracted from the pit with front-end loaders, dumped into a hopper, crushed, screened and stockpiled. Finished products were sold for use as construction aggregate.

The last regular inspection of this operation was completed on November 5, 2003.

DESCRIPTION OF ACCIDENT

On the day of the accident, Julian Harvey (victim) reported to work at 7:00 a.m., his scheduled starting time. At the beginning of the shift, he assisted with repair work on the jaw crusher. About 8:30 a.m., the repair was completed and the plant was started. Julian Harvey told Jeffrey Salazar, plant operator, he was taking a break and would be back soon. He left the control room.

Approximately 20 minutes later, Salazar asked Jay Harvey, laborer, to help him look for Julian Harvey while he made his rounds through the plant. Salazar found the victim caught in a conveyor return idler under the portable screen. Salazar immediately shut the equipment down and summoned Michael Hitti, vice president, who had been operating a front-end loader. Hitti told Salazar to call for emergency medical assistance. After Hitti cut the conveyor belt to free the victim, he and Jay Harvey administered cardiopulmonary resuscitation until emergency medical personnel arrived. The victim was pronounced dead at the scene by medical personnel. The cause of death was attributed to multiple blunt trauma.

INVESTIGATION OF ACCIDENT

MSHA was notified of the accident at 11:38 a.m., on August 1, 2005, by a telephone call from Sheila Stanley, Occupational Safety and Health Administration, to Irvin T. Hooker, district manager. 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 accident investigators traveled to the mine, made a physical inspection of the accident scene, interviewed employees, and reviewed conditions and work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine management and employees.

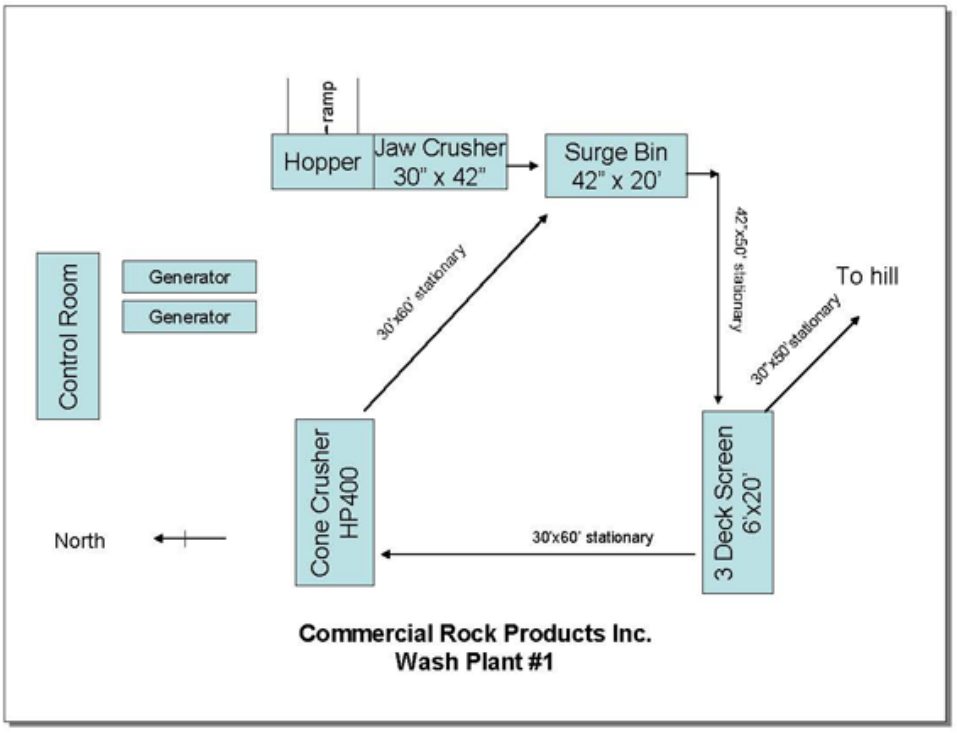
DISCUSSION

Location of the Accident

The accident occurred in the plant area underneath the south side of the portable screen. The portable screen had three decks and was mounted on a rigid trailer frame with dual axels equipped with tires.

Power to the plant was provided by two generators. The plant was controlled from a control booth that overlooked the operation. Visibility from the control room was good with a view of all equipment.

Plant Layout



Equipment

The conveyor involved in the accident was mounted horizontally beneath the bottom screen. It transferred material from the screen and discharged it onto another conveyor belt.

The conveyor was about 24 feet long, 48 inches wide and positioned about 4 feet above ground level.

The distance between the center of the conveyor head pulley and the first return idler was approximately 30-1/2 inches. The unguarded return idler was 44 inches long , 4-1/2 inches in diameter, and was located underneath the conveyor. Clay had stuck to the surface of the idler and was found in varying thickness.

A steel shovel with a wooden handle had been pulled through the return idler and was wedged between the underside of the conveyor belt and the framework of the screen.

Weather

It was 79 degrees and the sky was clear. Weather was not considered a factor in the accident.

Medical Analysis

The toxicology laboratory report found the victim's blood alcohol level to be 0.08 percent. This level exceeded Colorado's limit of impairment and may have contributed to the accident.

Training and Experience

Julien J. Harvey had eight weeks mining experience, all at this operation. He had received training in accordance with 30 CFR, Part 46.

ROOT CAUSE ANALYSIS

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

Causal Factor: Standards, policies and controls were inadequate. Procedures had not been established to ensure that the conveyor belt's power was off and the belt blocked against hazardous motion before maintenance work was performed. A shovel was used to clean a conveyor return idler while the conveyor belt was operating.

Corrective Action: Management should develop and implement a policy requiring power to be shut off and equipment blocked against hazardous motion before any maintenance work is performed on machinery or equipment.

Causal Factor: Standards, policies and controls were inadequate. Management failed to implement hazard recognition that trained miners to identify all potential hazards and eliminate them prior to performing any tasks near moving machinery components.

Corrective Action: Employees should be trained to Stop, Look, Analyze, and Manage (SLAM) each task to evaluate possible hazards and ensure steps are taken to safely perform the task.

Causal Factor: Standards, policies and controls were inadequate. Management failed to implement a procedure to recognize alcohol use on mine property.

Corrective Action: Management should develop and implement a procedure for recognizing alcohol use on mine property.

CONCLUSION

The accident occurred because safe operating procedures were not implemented prior to performing maintenance on the energized conveyor belt. The conveyor belt's power was not shut off and the belt was not blocked against hazardous motion before work was performed on the return idler.

ENFORCEMENT ACTIONS

Order No. 6312977 was issued on August 1, 2005, under the provisions of Section 103(k) of the Mine Act:

> A fatal accident occurred at this operation on August 1, 2005, when an employee was caught in a return idler on the product conveyor belt under the portable triple deck screen. The shovel being used by the employee was drawn through the idler, pulling the miner into the pinch point. This order is issued to ensure the safety of all persons at this operation. It prohibits all activity at the conveyor area until MSHA has determined that it is safe to resume normal operations. The mine operator shall obtain prior approval from an authorized representative for all actions to recover and/or resume operations in the affected area.

This order was terminated on August 3, 2005. Conditions that contributed to the accident no longer exist and normal mining operations can resume.

Citation No. 6312994 was issued August 17, 2005, under the provisions of Section 104(a) of the Mine Act for violation of 56.14105:

> A fatal accident occurred on August 1, 2005, when a plant laborer's arm was drawn into a conveyor belt return idler. Maintenance was being performed on the equipment with the power on, the equipment running, and without blocking it against hazardous motion.

This citation was terminated on August 19, 2005. All mine employees have been reinstructed to remove power from the conveyor belt and to block them against hazardous motion.

Citation No. 6313046 was issued October 18, 2005, under the provisions of Section 104(a) of the Mine Act for violation of 56.20001:

> A fatal accident occurred at this operation on August 1, 2005. The victim's blood alcohol test result was 0.08%. Therefore, the victim was under the influence of alcohol. Persons under the influence of alcohol shall not be permitted on the job.

This citation was terminated on October 27, 2005. Management developed and implemented a procedure to recognize alcohol use on mine property.

Approved by, Date: October 28, 2005

Irvin T. Hooker
District Manager

APPENDIX A
Persons Participating in the Investigation

Commercial Rock Products

Ronald Hitti	president
Michael Hitti	vice-president

State of Colorado

Scott B. Waybright	mine inspector/trainer

La Plata County Sheriff's Office

Larry E. Foukas	investigator
Patrick M. Beyer	deputy
Dr. Carrol Huser	county coroner
Walt Walker	risk manager

Mine Safety and Health Administration

Dale D. Teeters	mine safety & health inspector
Barbara J. Renowden	mine safety & health specialist