

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

REPORT OF INVESTIGATION

**Surface Nonmetal Mine
(Sand & Gravel)**

**Fatal Electrical Accident
June 21, 2006**

**Hard Rock Inc.
Gardiner Pit
Sequim, Jefferson County, Washington
Mine I.D. 45-03234**

Investigators

**Randy L. Cardwell
Supervisory Mine Inspector**

**Denis J. Karst
Mine Safety and Health Inspector**

**James E. Stembridge
Mine Safety and Health Inspector**

**Stephen B. Dubina
Electronics Engineer**

**Melvin 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**

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OVERVIEW

On June 21, 2006, Ivan J. Rettig, contract electrician, age 75, was fatally injured when he contacted an energized 480 volt circuit in the main breaker panel located in the motor control center. The victim was preparing to install electrical components for a new wash plant when the accident occurred.

The accident occurred because safe operating procedures were not implemented to ensure that the electrical circuit was de-energized, locked out, tagged, and tested prior to performing work on the circuit.

GENERAL INFORMATION

Hard Rock Gardiner Pit, a surface sand & gravel operation, owned and operated by Hard Rock Inc., was located in Sequim, Jefferson County, Washington. The principal operating officials were William Arness, president, and Lawrence Todd, vice president. The mine normally operated one 8-hour shift per day, five days per week. Total employment was two persons.

Sand & gravel was extracted from the pit with an excavator. The material was washed, screened, and stockpiled. Finished products were sold for use in the construction industry.

The last regular inspection at this operation was completed on October 25, 2005.

DESCRIPTION OF THE ACCIDENT

On the day of the accident Ivan J. Rettig, (victim), contract electrician and owner of Poulsbo Electric, arrived at the mine site at 9:00a.m. to install conduit and a new breaker for the new wash plant and water pump. Robert Davies, plant supervisor, asked Rettig if the old wash plant could be operated while he worked on the new electrical installation. Reportedly, Rettig said the old plant could be operated.

About 9:15 a.m., the old wash plant unexpectedly shut down while Robert Brown, loader operator, was feeding material into it. Brown went into the motor control center where he found Rettig leaning against the energized 440 volt electrical components. Brown realized the electrical panel was still energized and notified Davies who immediately called for emergency medical assistance and contacted the fire department.

Emergency rescue personnel arrived to find the motor control center on fire. Puget Sound Electric was called and came to disconnect the power. The fire was then extinguished and the victim was removed. Rettig was pronounced dead at the scene by the Jefferson County coroner. The cause of death was attributed to electrocution.

INVESTIGATION OF THE ACCIDENT

MSHA was notified of the accident at 11:05 a.m., on June 21, 2006, by a telephone call from Gary McIntyre, safety administrator, to Melvin Palmer, mine safety and health specialist. An investigation began 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, made a physical inspection at the accident scene, interviewed employees, and reviewed conditions and work procedures relevant to the

accident. MSHA conducted the investigation with the assistance of management and employees. The Jefferson County coroner's and sheriff's office, and the local fire department also assisted.

DISCUSSION

Location of the Accident

The accident occurred at the motor control center located on the north side of the mine site across from the old wash plant. The motor control center was approximately 14 feet wide and 29 feet long. The main breaker panel was located inside the motor control center on the northeast wall just to the right of the door.

Equipment

There were 12,470 volts on the primary side of the main transformers on the power pole.

The 480 volt service conductors traveled from the transformers on the power pole underground to the service panel on the north outside wall of the motor control center. The service conductors then traveled through the wall and into the main breaker panel located on the east wall inside the door of the motor control center.

The main breaker panel was made by Cutler Hammer. The model number was not legible because it was damaged from the fire.

The main 480 volt electrical panel supplied electrical power to the old wash plant and was going to be the main power source for the new wash plant.

Training and Experience

Ivan J. Rettig had 50 years experience. Since 2002, he worked as an electrician, as needed about ten days a year, at this plant. He had not received training in accordance with 30 CFR, Part 46. A training violation was issued as non-contributory to the accident.

Weather

The weather on the day of the accident was sunny and warm, with temperatures ranging from 70 to 75 degrees Fahrenheit.

ROOT CAUSE ANALYSIS

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

Root Cause: Management policies and controls were inadequate and failed to require that the electrical circuit was de-energized, locked out, tagged, and tested before work was performed on the circuit. Management and the contractor failed to discuss the possible hazards and all actions necessary to safely complete the maintenance task.

Corrective Action: Management should conduct a risk assessment with each contractor to identify and correct all possible hazards and establish safe procedures before the contractor begins work at the mine.

CONCLUSION

The accident occurred because safe operating procedures were not implemented to ensure that the electrical circuit was de-energized, locked out, tagged, and tested prior to performing work on the circuit. Management failed to discuss all safety hazards and requirements with the contractor prior to commencement of the assigned task.

ENFORCMENT ACTIONS

Hard Rock Inc.

Order No. 6371759 : was issued on June 21, 2006, under the provisions of Section 103 (k) of the Mine Act:

A fatal accident occurred at this operation on June 21, 2006, when an electrician was contracted to supply power to a new water pump and wash plant equipment. This order is issued to assure the safety of all persons at this operation. It prohibits all activity at the mine power supply points until MSHA has determined that it is safe to resume normal mining operation 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 June 24, 2006. The 480 volt electrical power supply to the motor control center has been disconnected and the power supply can not be restored until a new motor control center is installed and inspected.

Citation No. 6338475: was issued on June 21, 2006, under the provisions of Section 104 (d)(1) of the Mine Act for a violation of 30 CFR 56.12017:

On June 21, 2006, a contractor electrician was fatally injured while working on the energized main 480-volt electrical panel for the motor control center. The

electrician was in the process of installing electrical components for a new wash plant and water pump. Power to the panel had not been de-energized prior to the removal of the inner cover plate and mine management knew the electrician was working on the energized electrical panel. Management's failure to ensure the power to the electrical panel was de-energized, constituted more than ordinary negligence, and was an unwarrantable failure to comply with a mandatory standard.

This citation was terminated on July 21, 2006. Employees have been retrained on lock out tag out procedures. Mine management has further instructed employee's that electrical circuits can not be worked on unless electrical power is shut off and locked out.

Poulsbo Electric

Ivan J. Rettig was a sole proprietor acting as a contractor. Upon Rettig's death, the sole proprietorship ceased to exist. There was no entity to cite for any violations of mandatory safety standards attributable to Rettig.

Approved By:

Arthur L. Ellis
District Manager

Date

APPENDIX

Persons Participating in the Investigation

Hard Rock Inc.

Larry R. Todd	owner/vice president
Gary P. McIntyre	safety administrator
Robert W. Davies	plant supervisor
Robert D. Brown	equipment operator

Jefferson County Sheriff's Office

Michael R. Stringer	sergeant
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Puget Sound Electric

Clayton L. Swanson	electrician
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Jefferson County Coroners Office

Shane R. Seaman	deputy prosecuting attorney/coroner
Daniel M. Sealove	M.D./forensic pathologist
Real R. Robles	funeral home director

Clallam County Fire District #3

Tony J. Hudson	captain
Leonard L. Horst	firefighter/paramedic

Mine Safety and Health Administration

Randy L. Cardwell	supervisory mine safety and health inspector
Denis J. Karst	mine safety and health inspector
James E. Stembridge	mine safety and health inspector
Stephen B. Dubina	electronics engineer
Melvin Palmer	educational field services