

Summary of 2015 First Quarter Fatal Accidents at Metal/Nonmetal Mines and Preventative Recommendations

During the first quarter of 2015, six miners were killed in accidents in the metal and nonmetal mining industry.

Two miners died in **Machinery** accidents. One miner was killed in **Falling Material** accident. One miner is dead as a result of a **Powered Haulage** accident. Another miner was killed in a **Hoisting** accident. A **Fall of Roof** accident claimed the life of another miner.

When completed, a detailed investigation report of each fatality will be posted on the MSHA website at:

<http://www.msha.gov/fatals/fab.htm>.

Here is a brief summary of these accidents:

Two miners were killed in Machinery accidents.

A 57-year-old miner was operating an excavator near a ditch when the excavator tipped on its side and went in the water. The miner was removed from the cab and transported to a hospital where he died.

A 48-year-old miner was operating a walk behind masonry saw, positioned between the saw and a ledge, when he tripped and fell. The victim and the saw went over the 4½ foot ledge and the saw fell on him.

One miner was killed in a Falling Material accident.

A 63-year old contractor was severely injured while installing new screen panels in the B tower screen. The feeder box pivoted, pinning him between the box and the rear support beam of the screen deck. The victim was transported to a hospital where he died.

One miner died in a Powered Haulage accident.

A 44-year was truck driver was operating a loaded articulated haul truck on an elevated haul road adjacent to a dredge pond. After traveling about 125 yards from the loading point, the haul truck drifted into the water. The victim was removed from the truck, transported a hospital, and then transferred to a trauma center where he died two days later.

One miner died in a Hoisting accident.

A 53-year-old miner was on a work platform on top of a skip traveling up the ventilation shaft when he struck a cross member in the shaft.

One miner died in a Fall of Roof accident.

A 54-year-old miner was operating a mechanical scaler in an intersection when a roof fall (30 feet long x 15 feet wide x 6 high) occurred covering the machine.

Best Practices

While some of the specific circumstances of these accidents remain under investigation, here are the best practices we can identify at this time to prevent accidents like these from recurring:

Machinery Accidents

These deaths can be prevented by following these Best Practices:

- Task train all persons to recognize all potential hazardous conditions and safe job procedures to identify and eliminate all hazards before beginning work, specifically the limited visibility of large equipment.
- Discuss safe work procedures before beginning work. Identify and control all hazards associated with the work to be performed and the methods to properly protect miners.
- Provide traffic patterns and roads that minimize the danger of machines traveling near bodies of water.
- Conduct examinations of travelways to evaluate hazards.
- Install barriers, markers, or other warning devices to aid equipment operators where travelways are not recognizable or hazards are not apparent. Limit travel of mobile equipment and inform mobile equipment operators of hazards.
- Do not travel into areas where ground conditions can't be verified. If necessary, use the bucket of the machine to probe the travel/work area to check the ground conditions
- Keep workplaces free of tripping hazards.
- Use barricades or railings at edges of drop-offs where persons are in danger of falling.
- Equip walk behind masonry saws with automatic shut off devices to stop the engine if the operator cannot maintain control of the equipment.
- Design bench top stone cutting patterns to ensure the saw operator is not positioned between the saw and the drop off edge

Falling/Sliding Material Accident

This death can be prevented by following these Best Practices:

- Establish and discuss safe work procedures. Identify and control all hazards associated with the work to be performed along with the methods to properly protect persons.
- Always follow the equipment manufacturer's recommended maintenance procedures when conducting repairs to machinery.
- Task train all persons to recognize all potential hazardous conditions and understand safe job procedures to eliminate all hazards before beginning work.
- Securely block equipment and components against hazardous motion at all times while performing work.
- Ensure that blocking material is competent, substantial, and adequate to support the load.
- Require all persons to be positioned to prevent them from being exposed to any hazards. Do not work in pinch points where inadvertent movement could cause injury.
- Monitor all persons to ensure safe work procedures, including safe work positioning, are followed.

Hoisting Accident

This death can be prevented by following these Best Practices:

- Train all persons in hazard recognition, awareness of their surroundings, and safe positioning when riding skips.
- To prevent hazard exposure, require safe positioning for personnel who ride skips.
- Monitor all persons for safe positioning when riding skips.
- Place warning signs on skip platforms to remind persons to keep body parts inside the handrails.

Fall of Roof Accident

This death can be prevented by following these Best Practices:

- Establish safe work procedures that ensure a safe work location for miners conducting scaling operations, and train all miners to recognize and understand these procedures.
- Always examine and test areas for loose ground before starting to work, after blasting, and as ground conditions warrant.
- Identify and scale loose material from a safe position which will not expose miners to falling material.
- Test for loose material frequently during work activities. Be alert to any change of ground conditions.
- Install ground support in roof and ribs where conditions warrant.
- Use equipment with a reach that reduces the possibility of the equipment being struck by falling material.

Violations of the priority standards identified as **Rules to Live By** continue to be cited during investigations of mine fatalities. While not all of the fatality investigations have been completed and enforcement action taken, Rules to Live By standards continue to be identified in many of those fatalities. During inspections, MSHA's inspectors continue to discuss, with miners and supervisors, the root causes of these fatalities and the ways to prevent recurrences.

Contractors

Two contractors were killed at metal and nonmetal mining operations in the first quarter of 2015. Contractors and mine operators should ensure that contractor employees are properly trained and follow the mine's safety policies and procedures. Contractors and mine operators should coordinate operations at the mine to ensure that safety and health management programs are in place and are effective, all workplace examinations are performed, and safe work procedures are followed.

The importance and value of effective **Safety and Health Management Programs** helps send miners home safely at the end of their shifts. A thorough, systematic review of all tasks and equipment to identify hazards is the foundation of a well-designed safety and health management program. Many root causes of fatal accidents show that management policies, procedures, and controls were inadequate and failed to ensure that persons were protected from hazards that could have been identified and then eliminated or controlled. Mine operators and contractors need to implement effective safety and health management programs and periodically review, evaluate, and update them. If an accident or near miss occurs, find out why and act to prevent a recurrence. If changes to equipment, materials, or work processes introduce new risks into the work environment, address them immediately.

Conducting **Workplace Examinations** every shift can prevent deaths when safety and health hazards are **found and fixed**. Miners are protected when workplace examinations are performed, problems are identified, and hazards are eliminated.

Note: **42** miners died as a result of accidents that occurred at Metal/Nonmetal Mines since October 2013. Miners died as a result of failure to follow basic safety rules, including: locking out and tagging out equipment, wear seat belts, wear fall protection, follow safe blasting procedures, controlling ground conditions, conduct pre-operational checks on mobile equipment and fix any problems found. **Ten supervisors died**. Supervisors should set the example and train miners to follow safe job procedures. Establish and discuss safe work procedures. Task train persons to recognize all potential hazardous conditions and eliminate those hazards before beginning work.

Miners deserve a safe and healthy workplace and the right to return home injury free at the end of every shift. We must all continue to work together to make that happen.