

Summary of 2014 First Quarter Fatal Accidents at Metal/Nonmetal Mines and Preventative Recommendations

During the first quarter of 2014, five miners were killed in accidents in the metal and nonmetal mining industry.

Two miners died in **Falling/Sliding Material** accidents. Two miners were killed in **Fall of Person** accidents. One miner is dead as a result of a **Powered Haulage** accident.

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 Falling/Sliding Material accidents.

A 50-year old supervisor with 27 years of experience was killed at a sand and gravel mine. The victim was at a reclamation dump site and approached an 80-foot high embankment when it failed, engulfing him.

A 64-year-old foreman with 32 years of experience was seriously injured when he was struck by a section of plastic water pipe as it was being moved by an excavator. The victim was transported to a hospital where he died three days later as a result of his injuries.

Two miners were killed in Fall of Person accidents.

A 34-year old contract laborer with 6 months of experience was killed at a cement operation when attempting to access an elevator in the finish mill. When the victim opened the elevator door on the fourth floor landing, he stepped into the elevator shaft and fell approximately 51 feet to the top of the elevator car located on the ground floor.

A 27-year old contract mechanic was repairing a hydraulic pump on a scaler when he fell from the attached walkway approximately 5 feet to the ground. The victim was airlifted to a hospital where he died the next day.

One miner died in a Powered Haulage accident.

A 56-year old belt operator with 11 months of experience was killed at an iron ore mine. The victim was cleaning a return idler inside the frame of a belt conveyor when he became entangled between the return idler and the belt.

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:

Falling/Sliding Material Accidents

These deaths can be prevented by following these Best Practices:

- Establish and 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 persons.
- Task train all persons to recognize all potential hazardous conditions and to understand safe job procedures for elimination of the hazards before beginning work.
- Prior to beginning work and as ground conditions warrant during the shift, examine all pit, highwall, slope, and bank conditions. Be especially vigilant for these conditions after each rain, freeze, or thaw.
- Use mining methods that ensure pit, highwall, slope, and bank stability and safe working conditions.
- Correct hazardous conditions by working from a safe location.
- Stay clear of potentially unstable areas.
- Wear suitable hard hats where falling objects may create a hazard.
- Stay clear of a suspended load.
- Attach taglines to loads that may require steadying or guidance while suspended.
- Implement measures to ensure persons are properly positioned and protected from hazards while performing a task.
- Monitor persons routinely to determine safe work procedures are followed.

Fall of Person Accidents

These deaths can be prevented by following these Best Practices:

- Immediately report any elevator problems to management.
- Ensure that any problems affecting the safety of an elevator are repaired promptly.
- Ensure that elevator door interlocks, that prevent the door from being opened unless the elevator car is present, are functional.
- Ensure that elevator doors will not open unless an elevator car is at the floor landing.
- Install audible signals that sound when the elevator car is at the landing prior to the doors opening.
- Train all persons to be aware of their surroundings when entering or exiting an elevator car.
- Install railings or handrails when persons are required to work or travel near the edge of a structure.

Powered Haulage Accidents

These deaths can be prevented by following these Best Practices:

- Establish policies and procedures for conducting specific tasks on belt conveyors.
- Before beginning any work, ensure that persons assigned to clean belt conveyors are task trained and understand the hazards associated with the work to be performed.
- Do not perform work on a belt conveyor until the power is off, locked, and tagged, and machinery components are blocked against motion.
- Never clean pulleys or idlers manually while belt conveyors are operating.
- Identify hazards around belt conveyor systems, design guarding, and securely install the guarding to ensure miners do not contact moving parts.

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 2014. 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.

Two of the miners killed during the first quarter of 2014 had less than one year of experience. Providing effective and appropriate **Training** to miners, including experienced miners, is a key element in ensuring their safety and health. Mine operators and Part 46 and Part 48 trainers need to train miners and mine supervisors to take appropriate measures to eliminate the conditions that lead to deaths and injuries.

Note: Eighteen 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. Five 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.