

Fourth Quarter 2014 Summary of Fatal Accidents at Metal/Nonmetal Mines with Preventative Recommendations

During the fourth quarter of 2014, five miners were killed as a result of accidents in the metal and nonmetal mining industry.

Three miners died in **Powered Haulage** accidents, one miner died in a **Fall of Person** accident, and one miner died as a result of a **Falling Material** accident. Three of the fatalities were **contractors**.

When completed, a detailed investigation report of each fatality is posted on the MSHA website at: <http://www.msha.gov/fatals/fab.htm>

Here is a brief summary of these accidents:

Three miners were killed in Powered Haulage accidents.

On November 25, 2014, a 67-year-old truck driver with 10½ years of experience was killed at a sandstone mine. The victim backed a haul truck to the edge of the overburden dumpsite and started to raise the truck's bed to dump a load of material. The bank failed, causing the truck to overturn and fall 30 feet below. The victim died en route to the hospital.

On December 1, 2014, a 46-year-old contract truck driver with 26 years of experience was killed at a limestone mine. The articulating haul truck he was operating traveled over a roadway berm and went into a large pond. Dive teams extricated the victim from the truck.

On December 29, 2014, a 21-year old warehouse bagger with 1 week of experience was killed at a clay mine. The victim was operating a forklift, hauling a bag of dust, when the forklift overturned.

One miner was killed in a Fall of Person accident.

On October 10, 2014, a 66-year-old contract truck driver with approximately 11 years of experience was killed at a cement operation. The driver was inside a loading rack closing the hatch on top of a bulk tanker truck. When the victim raised the rack to access the hatch, he fell between the rack and rounded side of the truck and then fell to the ground.

One miner was killed in a Falling Material accident.

On November 18, 2014, a 42-year-old contract supervisor with 19½ years of experience was killed at an alumina operation. A crane was lifting a 2,500 pound door to be installed on a filtrate tank. The welded lifting eye on the door broke loose and the door fell, pinning the victim on the concrete floor.

Best Practices

While some of the specific circumstances of these accidents remain under investigation, here are some of the best practices that can prevent them:

Powered Haulage Accidents

These deaths can be prevented by following these Best Practices:

- Task train mobile equipment operators adequately in all phases of mobile equipment operation before operating mobile equipment.
- Establish and discuss safe work procedures before beginning work.
- Identify and control all hazards associated with the work to be performed.
- Conduct adequate pre-operational checks and correct any defects affecting safety in a timely manner prior to operating mobile equipment.
- Always wear a seat belt when operating self-propelled mobile equipment.
- Examine dumping locations for stability prior to dumping the first load and as ground conditions warrant during the work shift. Where trucks are loaded out of the stockpile or ground conditions may fail to support the weight of the truck, dump loads a safe distance back from the edge.
- Maintain berms or similar impeding devices at dumping locations where there is a hazard of overtravel or overturning.
- Travel in a straight line when backing a truck toward a dump location. Do not approach on a turn.
- Monitor persons routinely to determine safe work procedures are followed.
- Maintain control of self-propelled mobile equipment while it is in motion.
- Operate mobile equipment at speeds consistent with the conditions of roadways, tracks, grades, clearance, visibility, curves, and traffic.
- Provide and maintain adequate berms or guardrails on the banks of roadways where a drop-off exists.

Fall of Person Accidents

These deaths can be prevented by following these Best Practices:

- Establish traffic patterns to ensure safe alignment of vehicles with access equipment.
- Identify and control all hazards associated with the work to be performed and use methods to properly protect persons.
- Ensure that persons are trained, including task-training, to address the hazards associated with the work being performed.
- Always use fall protection when working where a fall hazard exists.
- Always be aware of your surroundings and any hazards that may be present.

Falling 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.
- Task train all persons to understand safe job procedures and to stay clear of suspended loads.

- Use welded lifting eyes that are specifically intended for lifting and adequately rated for the loads being lifted.
- Use certified welders and good quality welds when attaching lifting eyes or lugs.
- Ensure the weld metal is compatible with the base metal of the connecting components and thoroughly clean any rust or scale from a surface prior to welding.
- Carefully inspect all rigging prior to each use.
- Attach taglines to loads that may need steadied or to be guided while suspended.
- Avoid extreme side loading on a lifting eye or lug unless it is designed to handle such loading.
- Monitor persons routinely to determine safe work procedures are followed.

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.

Three **contractors** were killed at metal and nonmetal mines in the fourth quarter of 2014. Contractors and mine operators should ensure that contractors are properly trained and following 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** at the beginning of every shift can prevent injuries and deaths when safety and health hazards are **found and fixed**. Miners are protected when workplace examinations are conducted and hazards are identified and eliminated.

One of the miners killed had only one week of experience. Providing effective and appropriate **training, including task training**, to miners is a key element in ensuring

their safety and health while at work. Mine operators and Part 46 and Part 48 trainers need to train miners and supervisors to take appropriate measures to find and eliminate the conditions that lead to injuries and deaths. Effective and appropriate training ensures that miners recognize hazards and understand how to control or eliminate them.

Take action to prevent additional injuries and deaths. Printable posters regarding the causes of some of these accidents can be found on the Alerts/Hazards section of MSHA's website, www.msha.gov. Fatalgrams describing each fatality and Best Practices to prevent a recurrence can also be found on the agency's website.

Miners deserve a safe and healthy workplace and the right to go home safe and healthy at the end of every shift, every day. We must continue working together to make that happen.