Summary of 2013 (1st Quarter) Fatal Accidents at Metal/Nonmetal Mines and Preventative Recommendations

During the first quarter of 2013 (January 1 – March 31, 2013), three miners were killed in accidents in the metal and nonmetal mining industry.

One miner died as a result of a **Fall of Highwall** accident. One miner was killed in a **Machinery** accident and one miner died in an **Explosives and Breaking Agents** accident. We need to work together to prevent additional fatalities.

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

Here are brief summaries of these accidents:

One miner was killed when he was involved in a Fall of Highwall accident.
A 49-year old assistant plant manager with 30 years of experience was injured at a crushed stone operation. The victim was working on a lift, taking samples from a highwall, when a large rock fell and struck him. He was hospitalized and died 12 days after the accident.

One miner was killed in a Machinery accident.
A 54-year old mechanic with 6 years of experience was killed at a lime operation. The victim went to a kiln pre-heat deck to repair a leaking hydraulic cylinder that activates a pusher arm on the kiln. He was caught between the corner of the angle iron and the plate connecting the push rods.

One miner was killed in an Explosives and Breaking Agents accident.
A 61-year old loader operator with 24 years of experience was killed at a crushed stone operation. The victim was in a front-end loader about 50 feet from the base of a highwall when a blast was initiated. Broken rock struck the front-end loader and covered it. The rock was removed from the front-end loader and the victim was recovered about 10 hours after the blast occurred.

Best Practices
Miners do not need to die while working at metal and nonmetal mining operations. These fatalities can be prevented. Effective safety and health management programs save lives. Workplace examinations can identify and eliminate hazards that kill and injure miners. Effective and appropriate training helps ensure that miners recognize and understand hazards and how to control or eliminate them.

While some of the specific circumstances of these accidents remain under investigation, here is what we know at this time:

Fall of Highwall Accident
This death can be prevented by following well-known precautions:

- Establish and discuss safe work procedures for working near highwalls. Identify and control all hazards.
- Train all persons to recognize adverse conditions and environmental factors that can decrease highwall stability and understand safe job procedures to eliminate all hazards before beginning work.
- Look, listen and evaluate pit and highwall conditions daily, especially after each rain, freeze, or thaw.
- Remove loose or overhanging material from the face. Correct hazardous conditions by working from a safe location.
- Ensure that work or travel areas and equipment are a safe distance from the toe of the highwall.

Machinery Accident
This death can be prevented by following well-known precautions:

- 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.
- Before working on or near equipment, ensure that the equipment power circuits are locked out/tagged out and that the equipment is blocked against hazardous motion.
- Require all persons to be positioned so that they are not exposed to any hazards. Monitor personnel to ensure safe work procedures, including lock out/ tag out and safe work positioning, are followed.
- Ensure guarding is in place to cover potential pinch points and moving parts in areas routinely accessed by personnel.

Explosives and Breaking Agents Accident
This death can be prevented by following well-known precautions:

- Do not initiate a blast until it has been determined that all persons have been evacuated from the blast area.
- 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.
- Task train all persons to recognize all potential hazardous conditions, to ensure all persons have left the blast area, and to understand safe job procedures for elimination of the hazards before beginning work.

- Maintain and use all available methods of communication, such as sirens and radios, to warn persons of an impending blast. Establish methods to ensure that all persons are out of the blast area.
- Before firing a blast give ample warning to allow all persons to be evacuated.
- Guard or barricade all access routes to the blast area to prevent the passage of persons or vehicles.
- Verify that the blasting procedures are effective and being followed at all times.

Violations of the priority standards identified as **Rules to Live By** continue to play key roles in mine fatalities. While not all of the fatality investigations have been completed, not all of the violations have been identified, and not all of the associated citations and orders have been issued, it currently appears that violations of the Rules to Live By standards were still involved in several of those fatalities. MSHA's inspectors will be especially mindful of these issues while performing inspections. They will be talking to miners and mine supervisors in mines throughout the country to discuss these kinds of fatalities, and the ways to prevent them.

Contractors

No contractors were killed at mining operations in the first quarter of 2013. However, 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** cannot be overstated. A thorough, systematic review of all tasks and equipment to identify hazards is the foundation of a well-designed safety and health management program. Modify equipment, processes, work procedures and management systems to eliminate or control identified hazards. Operators and contractors should create effective safety and health management programs, ensure that they are implemented, and periodically review, evaluate, and update them.

If an accident or near miss does occur, find out why and act to prevent recurrence. If changes to equipment, materials or work processes introduce new risks into the mine environment, address them immediately.

Conducting **workplace examinations** before beginning a shift and during a shift – every shift – can prevent deaths by finding and fixing hazards. All required

workplace examinations must be performed and identified hazards eliminated to protect miners.

Providing effective and appropriate **training** to miners is a key element in ensuring their safety and health. Mine operators and Part 46 and Part 48 trainers need to train all miners to recognize the conditions that lead to deaths or injuries and ensure that measures are taken and followed to eliminate hazardous conditions. Training all miners to follow safe work procedures and stay focused on the task they are performing cannot be stressed enough.

Miners deserve a safe and healthy workplace and the right to go home safe at the end of every shift, every day. Working together makes that happen.