Summary of 2014 (1st Quarter) Fatal Accidents at Coal Mines and Preventative Recommendations

During the first quarter of 2014, three miners were killed in accidents in the coal mining industry. Two miners died in **Machinery** accidents and one miner was killed in a **Powered Haulage** accident. 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:

Two miners were killed in Machinery accidents.
A 24-year-old continuous mining machine operator with 5½ years of mining experience was killed when he was pinned between the end of the boom of a continuous mining machine and the right coal rib. The miner was tramming the remote controlled continuous mining machine in the last open crosscut toward the Number 1 entry.

A 41-year-old mechanic trainee with 23 weeks of mining experience was killed while working on a belt conveyor feeder. The victim was cutting through the inner left side plate of the crawler assembly that connects the hopper jack assemblies to the crawler frame. When the cut was completed, the crawler assembly pivoted upward, pinning the victim between the crawler track and the frame of the feeder.

One miner was killed in a Powered Haulage accident.
A 20-year-old general inside laborer with 2 years of mining experience was killed when he was struck by a feeder. The victim was standing between the coal rib and the feeder when the securing post dislodged, allowing the tailpiece unit to shift and pin him between the rib and the frame of the feeder. The victim had just finished connecting a chain between the feeder and the tailpiece when the accident occurred.

Best Practices
Miners do not need to die while working at coal mining operations. These fatalities can be prevented. No miner should die while working. Effective safety and health management programs save lives. Workplace examinations can identify and eliminate hazards that kill and injure miners. Effective and appropriate training help 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:

Machinery Accidents

These deaths can be prevented by following well-known precautions:

- Install and maintain proximity detection systems to protect personnel and eliminate accidents of this type. See the proximity detection single source page on the MSHA website.
- Ensure everyone, including the equipment operator, is outside the machine's turning radius before starting or moving equipment.
- Develop policies and procedures for starting and tramming self-propelled equipment and especially remote controlled continuous mining machines. Implement measures to assure their use, which includes training all miners exposed to the hazards.
- Avoid the "RED ZONE" areas when operating or working near a continuous mining machine especially when setting over or place changing a remote controlled continuous mining machine.
- Use low speed tram when moving continuous mining machines where the left and right traction drives are operated independently.
- Assign another miner to assist the continuous mining machine operator when it is being moved or repositioned.
- Frequently review, retrain, and discuss avoiding the "RED ZONE" areas.
- Ensure that all stored energy is released or controlled before initiating repairs.
- Securely block equipment against all hazardous motion at all times while performing maintenance work. Take extra precautions if it is possible for the equipment to move in multiple directions.
- Always be aware of your location in relation to machine parts that can move. Examine work areas for hazards that may be created as a result of the work being performed.
- Establish and discuss safe work procedures before beginning work. Identify and control all hazards associated with the work to be performed to ensure miners are protected.
- Study the manufacturer's maintenance manual for safety precautions and recommended blocking securing procedures BEFORE initiating repairs.
- If specified, always use the manufacturer's safety device(s) or features for securing components against motion.
- See MSHA website for additional information on blocking against motion:

Powered Haulage Accidents

These deaths can be prevented by following well-known precautions:

- De-energize and lock out the conveyor belt before repositioning the tailpiece.
- 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.
- Use equipment or material capable of supporting the tailpiece.
- Ensure any bracing, such as a post, is hitched into the rib properly.
- Ensure the tailpiece is anchored securely before re-energizing the conveyor.

- Operate the belt before allowing miners around the repositioned tailpiece. Keep miners at a safe distance and avoid pinch points until it is determined that the tailpiece is secure.

Violations of the priority standards identified as **Rules to Live By** continue to play key roles in mine fatalities. While 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 contractor was killed at 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** 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 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 and healthy at the end of every shift, every day. Working together makes that happen.