MSHA Stakeholder/Quarterly Training Call

July 18, 2017
12:30pm - Jeff Duncan  Welcome and Introduction of Deputy Assistant Secretary Patricia Silvey
12:35pm - Patricia Silvey  Opening Remarks
12:40pm - Marcus Smith  Coal
  Larry Trainor  MNM
1:05pm    - Jeff Duncan  EPD
1:10pm     Questions
1:20pm     Closing Remarks
Coal Mine Safety & Health

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Coal Fatalities 2\textsuperscript{nd} Quarter 2017

- Surface Mines – 1
- Underground Mines – 4

- Classifications
  - Powered Haulage – 3
  - Machinery – 1
  - Fall of Roof – 1
Coal Fatalities by State

- West Virginia – 3
- Alabama - 1
- Montana – 1
Coal Fatalities by Occupation

- Continuous Mining Machine Operator – 1
- Section Foreman – 1
- Truck Driver – 1
- Utility Man - 1
- Preshift Examiner – 1
Coal Fatal No. 5 - On February 23, 2017, a 62-year-old section foreman was seriously injured by falling roof rock in the No. 3 entry of the active working section. The rock fell from between roof bolts and was approximately 3 feet by 2 feet by 3 to 4 inches thick. First-aid was administered and the injured miner was transported to a medical center. Due to medical complications from the injuries he sustained, the victim died on April 6, 2017.
Best Practices

• Install the most effective roof “skin” control technique, screen wire mesh, when roof bolts are installed.

• Conduct thorough examinations of the roof, face, and ribs where persons will be working and traveling; include sound and vibration testing where applicable.

• Scale loose roof and ribs from a safe location. Danger-off hazardous areas until corrective measures are made.
Best Practices (cont.)

• Be alert for changing conditions and report abnormal roof or rib conditions to mine management and other miners.

• Correct all hazardous conditions before allowing persons to work or travel in such areas. Install and examine test holes regularly for changes in roof strata.

• Propose revisions to the roof control plan as necessary to control hazards.
Coal Fatal No. 6 - On Saturday, May 6, 2017, a 62-year-old miner with 14 years of mining experience was fatally injured when the haul truck he was operating went over the highwall and fell approximately 150 feet. The victim was dumping overburden over the highwall when the accident occurred.
Best Practices

• DUMP SHORT and PUSH OVER when dumping loads over highwalls.
  – See MSHA’s Dump Point Inspection Handbook at

• Maintain adequate ground conditions, including berms, at dump locations.
Best Practices (cont.)

• Examine dump locations prior to beginning work and as changing conditions warrant. Clearly mark dump locations with reflectors and/or markers.

• Train miners to use safe dumping procedures and recognize dumping hazards.

• Monitor dumping activities to assure safe work practices are followed.
Coal Fatal No. 7 - On Thursday, May 18, 2017, an outby utility miner received fatal injuries when his head hit the mine roof and/or roof support. He and another miner were travelling in a trolley-powered supply locomotive when the accident occurred. While the locomotive was still in motion, the trolley pole came off the trolley wire. The victim grabbed the pole to place it back on the trolley wire. In this slightly elevated position, the victim hit his head on the mine roof and/or roof support and was fatally injured.
Best Practices

• STOP trolley-powered vehicles before placing the trolley pole back on the trolley wire.
• Mining conditions change – often abruptly. Always face the direction of travel and exercise extreme caution in low clearance areas.
• Keep all body parts within the operator’s compartment while a vehicle is in motion. Stay below the highest part of a vehicle frame or windshield, especially when travelling through low clearance areas.
• Install signs to warn miners of approaching low clearance areas and train miners to reduce speed in those areas.
Best Practices (cont.)

• Conduct proper travelway examinations to identify and mitigate the hazards presented by low clearances.

• Properly install and maintain trolley wire and trolley poles to eliminate areas where the trolley pole is prone to coming off the trolley wire.

• Examine the trolley pole harp for excessive wear. Ensure it is properly lubricated to allow it to swivel adequately to maintain proper contact with the trolley wire.
Fatal No.8 - On Tuesday, June 13, 2017, a 32-year-old continuous mining machine operator was fatally injured when he was pinned between the cutter head of a remote controlled continuous mining machine and the coal rib. The victim was backing the continuous mining machine from the working face when the accident occurred.
Best Practices

• Avoid “RED ZONE” areas when operating or working near a remote controlled continuous mining machine. Ensure all personnel, including the equipment operator, are outside the machine turning radius before starting or moving the equipment. STAY OUT of RED ZONES.

• Maintain a safe distance from any moving equipment and frequently review avoiding Red Zone areas. Position the conveyor boom and the cutter head away from yourself or other miners working in the area or when moving the machine.
Best Practices (cont.)

• Tram or reposition a remote controlled continuous mining machine from the rear of the machine to prevent disorientation. Never position yourself between the face and continuous mining machine when the machine is on.

• Disable the continuous mining machine pump motor before handling trailing cables or positioning trailing cable tie-offs onto the machine.

• Develop safe operating procedures for tramming, repositioning, or moving remote-controlled continuous mining machines.
Best Practices (cont.)

For Machines Equipped with Proximity Detection Systems

- Correct proximity detection system malfunctions when they occur and only use “Emergency Stop Override” to move the continuous mining machine to a safe location for repairs.
- Perform recommended manufacturer’s dynamic test to ensure the proximity detection system is functioning properly. Verify that the shutdown zones are at sufficient distances to stop the machine before contacting a miner.
- Mine wearable components should be worn securely at all times in accordance with manufacturer recommendations and in a manner so warning lights and sounds can be seen and heard.
Coal Fatal No. 9 - On June 19, 2017, a 32-year-old preshift examiner was fatally injured when he was thrown or jumped from a moving locomotive. Two locomotives (front and rear) were being used to transport three supply cars into the mine. The examiner was riding in the passenger seat of the front locomotive when the operators lost control on a grade and the locomotive derailed.
Best Practices

• Maintain all equipment, including diesel-powered locomotives, in approved and safe operating condition or remove from service.

• Conduct a pre-operational examination of mobile diesel-powered track equipment to be used during a shift. Equipment defects affecting safety shall be reported and corrected before the equipment is used.

• Perform functional tests of the brakes and sanders as part of the pre-operational examination.

• Train all mobile diesel-powered track equipment operators in the braking systems, as well as on changing weather conditions that can create dampness on the rails reducing traction.
Best Practices (cont.)

• Operate the haulage equipment at a safe speed consistent with the condition of the track haulage system and the haulage equipment.

• Engage both the automatic and manual braking systems when the locomotive is stopped for any reason.

• Secure the loads to prevent shifting while in motion.

• Ensure clear communication between operators when multiple locomotives are used for haulage.
Coal

Serious Accidents
Coal Serious Accident

A miner was checking the bearings of an impact roller when his elbow was caught in the impact roller. The miner suffered skin removal and burn injuries to his elbow.
Best Practices

• Before working on equipment, de-energize electrical power, lock and tag the visual disconnect with your lock and tag, and block parts that can move against motion.
• Keep guards securely in place while working around conveyor drives.
• Establish policies and procedures for conducting specific tasks on belt conveyors.
• Train all employees on the dangers of working or traveling around moving conveyor belts and their associated components.
Coal Serious Accident

A miner sustained two broken legs when the parked shuttle car he was standing next to was struck by a scoop.
Best Practices

• Remain in a safe area away from mobile equipment or where equipment operators can readily see you.
• Maintain clear visibility with all personnel in your vicinity when operating mobile equipment.
• Sound warnings when your visibility is obstructed or limited, such as when making tight turns, reversing direction, or approaching curtains.
• Wear reflective clothing to ensure high visibility when walking or working around moving mobile equipment.
• Exercise caution and signal your presence to mobile equipment operators.
Coal

Training Assistance Initiative
Coal Training Assistance Initiative

• As of this date in 2017, the coal industry has experienced 9 fatalities; one more than in all of 2016
• In 8 of 9 accidents, the victim had one year or less experience at the mine
• In 7 of 9 accidents, the victim had been working at occupation for one year or less
Coal Training Assistance Initiative

- MSHA’s data injury rate (October 2010 through March 2017) shows miners with one year or less experience at the mine or job suffer greater injuries than more experienced miners.
Coal Training Assistance Initiative

• June 19, 2017, MSHA launched a training assistance initiative to reach coal miners in these categories to assist in improving safety and health skills
• CAP employees and EFSMS specialists have been visiting coal mining operations to:
  – Ask mine operators to give MSHA lists of these miners and allow more experienced miners to travel with CAP/EFSMS personnel to talk/observe miners’ work practices
  – Talk to miners and observe their safety habits
  – Identify deficiencies in operators’ training programs
  – Work with operators to develop solutions
  – Initially focus on inexperienced miners in West Virginia
• MSHA has visited about 94 mines and talked/observed over 1,100 miners
Metal and Nonmetal Mine Safety & Health

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Metal and Nonmetal
Fatal Accident # 4 - 2017

On June 8, 2017, a truck driver was operating a Caterpillar 777F haul truck, dumping a load of gravel, when the ground at the dump point collapsed. The truck went over the edge of the dump point, overturning and landing on its roof approximately 30 feet below. The victim was transported to the hospital, where he later died of his injuries.
Metal and Nonmetal Serious Accident
Metal and Nonmetal
Serious Accident

Two miners were attempting to uncover a plugged up grizzly feeder by excavating out a slot cut. The walls of the slot cut sluffed off engulfing the two miners. While attempting to assist the trapped miners the walls sluffed again trapping an additional two miners. The material was waist high on three of the four miners and the fourth miner the material was over his shoulders. After several intense hours of rescue, the four miners were rescued and flown to a nearby hospital.
Metal and Nonmetal Serious Accident

A mine owner was pushing shot material with a bull dozer when the highwall failed and engulfed the bull dozer. The trapped victim was extricated from the bull dozer by the fire department and transported by helicopter to the hospital.
Metal and Nonmetal Serious Accident

A miner had just completed cleaning the ribs in preparation for rehabilitation of the area with new wire and bolts. The operator of the mucker noticed the rib he had just cleaned started to slough. The operator placed the mucker in reverse, but the rib sloughed before the mucker could move. The material covered the mucker, trapping the miner inside of the cab for several hours.
Metal and Nonmetal
Serious Accident

A haul truck driver with 6 weeks experience traveled into the pit loading area and waited to be loaded. The driver stopped the haul truck about 30 feet from where a supervisor parked his van. The supervisor had been giving instructions to excavator operators in the area, and he returned to his van as the loader operator sounded the horn to notify the driver to move the haul truck into position for loading. The truck driver drove forward, striking and pushing the supervisor’s van a distance of 30-40 feet. The supervisor was able to get out of the van through the window, and he had no injuries.
Best Practices

• Ensure trench walls are either supported for the full height or sloped to a safe angle.
• Carefully examine ground conditions prior to performing tasks near excavated embankments, trenches, or ditches.
• Identify hazards associated with the task to be performed and review those hazards with all personnel involved.
• Equip smaller vehicles with flags or strobe lights positioned high enough to be seen from the cabs of haulage trucks.
• Before moving mobile equipment, be certain no one is in the intended drive path, sound the horn to warn unseen persons, and wait to allow them time to move to a safe location.
• Do not become distracted by using a cell phone to text or call while operating equipment.
Educational Policy and Development

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Questions