



Quarterly Stakeholder Call

August 10, 2018

U.S. Department of Labor
Mine Safety and Health Administration



Agenda

- Introductory Remarks by Assistant Secretary David G. Zatezalo
- Fatality Review First Half of 2018
- Conveyor Belt Safety
- Open Comments and Questions



Introductory Remarks

David Zatezalo

Assistant Secretary for Mine Safety & Health



Metal and Nonmetal First & Second Quarter 2018 Fatalities Review

Larry Trainor

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MNM Fatality Summaries

January 25, 2018: Equipment operator killed when his articulated haul truck travelled through a berm and into an ice covered pond, submerging the truck's cab.



March 14, 2018: Crusher maintenance employee sustained a fatal head injury while installing discharge chutes on the screen deck. The suspended chute shifted striking the miner.

April 12, 2018: Truck driver killed when he fell from, and was run over by, his truck while scanning into the operator's check-in system. The victim was found underneath the belly dump of the semi-trailer, and the truck was still in gear.



MNM Fatality Summaries

May 9, 2018: Kiln technician burned while lighting a gas fired kiln. There was a blow back when igniting the kiln and the miner received burn injuries to his head and chest. The miner succumbed to his injuries on May 28, 2018.



June 13, 2018: Truck driver fatally injured when his truck traveled over a berm into an impoundment of water. Divers recovered the victim in 20 feet of water.

June 23, 2018: Miner fatally injured trying to stop two loaded run away railcars at a load out facility in Texas.



Coal

First & Second Quarter 2018 Fatalities Review

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Coal Fatality Summaries

February 6, 2018: Electrician was fatally injured while working alone performing routine maintenance on a continuous mining machine. A portion of rib, measuring 42 inches long, 28 inches high, and 14 inches thick, fell and struck the victim.



February 21, 2018: Highwall mining machine operator was electrocuted when he contacted an energized connection of a 7,200 volt electrical circuit.

March 16, 2018: Mechanic was fatally injured while operating a diesel personnel carrier on the mine haulage road. The vehicle hit the right rib and rolled onto its left side. The victim was partially ejected from the mantrip and the canopy of the mantrip came to rest on his chest.



Coal Fatality Summaries

March 28, 2018: Belt foreman was fatally injured while he and a co-worker were in the process of splicing an underground conveyor belt when the conveyor belt inadvertently started.

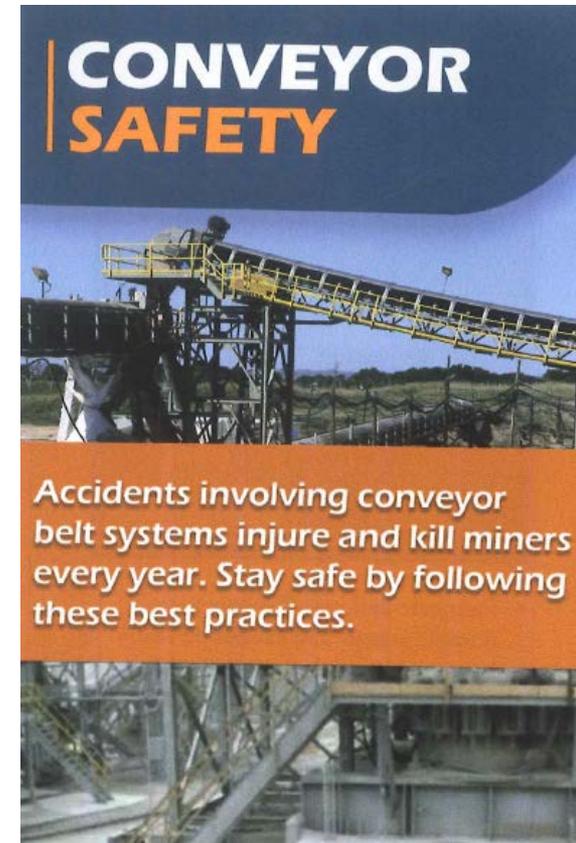


June 4, 2018: Miner was fatally injured when a roof jack struck him in the head. He was a passenger in a personnel carrier that traveled over the roof jack, which was lying in the roadway at the time. As a result of being hit, the roof jack was propelled into the passenger's compartment, striking the victim.



Powered Haulage Initiative

- Large mobile equipment and belt conveyor safety
- Web materials at www.msha.gov/poweredhaulage
- Conveyor Safety brochures coming soon
- [Request for Information](#) (RFI) open until Dec. 24, 2018



Stakeholder Meetings on Powered Haulage RFI

Date/Time	Location	Contact
Aug 16 11am	Webinar (Webex link)	202-693-9440
Aug 21 9am	Renaissance Reno Downtown Hotel One South Lake St Reno NV 89501	775-682-3900
Sep 11 9am	National Mine Health & Safety Academy 1301 Airport Road Beckley WV 25813	304-256-3100
Sep 20 9am	Hilton Albany 40 Lodge St Albany NY 12207	518-462-6611
Sep 25 9am	MSHA Headquarters 201 12 th St South, 4E401 Arlington VA 22202	202-693-9440



Coal

Conveyor Belt Safety



2017 and 2018 Coal Fatalities involving Conveyor Belts

2017

- Fatality No. 1 - January 26, 2017 - Miner contacted moving drive roller (area guard with a door)
- Fatality No. 12 - August 25, 2017 - Examiner crossing moving conveyor belt
- Fatality No. 14 - October 23, 2018 - Examiner crossing moving conveyor belt
 - All in West Virginia

2018

- Fatality No. 4 - March 28, 2018 - Foreman performing maintenance on conveyor belt that was not locked and tagged out
 - Kentucky



Conveyor Belt Maintenance

- Before splicing conveyor belts, perform the following steps:
 - Open the circuit breaker that supplies electrical power to the conveyor belt drive.
 - Open the visual disconnect for the cable that supplies electrical power to the conveyor belt drive.
 - Lock-out and tag-out the visual disconnect yourself and NEVER rely on someone to do this for you.
 - Release the tension in the conveyor belt take-up/storage unit.
 - Block the conveyor belt against motion.
- Keep the key to the lock at all times while repairs and/or maintenance are performed.
- Ensure that you are the only person who removes the lock after repairs and/or maintenance are completed.
- Ensure that no miner is in harm's way before starting the conveyor belts.
- Provide a visible and/or audible system, with a start-up delay, to warn persons prior to start-up of the belt.
- Establish policies and procedures for performing specific tasks on conveyor belts and ensure all miners are trained.



Conveyor Belt Crossings

Install practical belt crossing facilities at strategic locations, including near controls, when height allows.



Conveyor Belt Crossings

- Never attempt to cross a moving conveyor belt except at suitable crossing facilities.
- Train all employees thoroughly on the dangers of working on or traveling around moving conveyor belts.
- Provide conveyor belt stop and start controls at areas where miners must access both sides of the belt.
- Install pull cords and switches that control power to the belt along the wide side of the length of the conveyor belt to stop the belt in emergencies.



Metal and Nonmetal Conveyor Belt Safety & Guarding

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MNM Guarding Improvement Program

(An emphasis since 2005)

- Sought input from industry, esp. through Alliances
- Visited dozens of mines to review, photograph and video guards. Sought innovative and best practices.
- Two dozen presentations throughout the country
- Published two photo-illustrated Guarding slideshows with detailed compliance and best practice notes.
 - [Conveyors](#)
 - [Machinery](#)
- Trained inspectors and field office supervisors



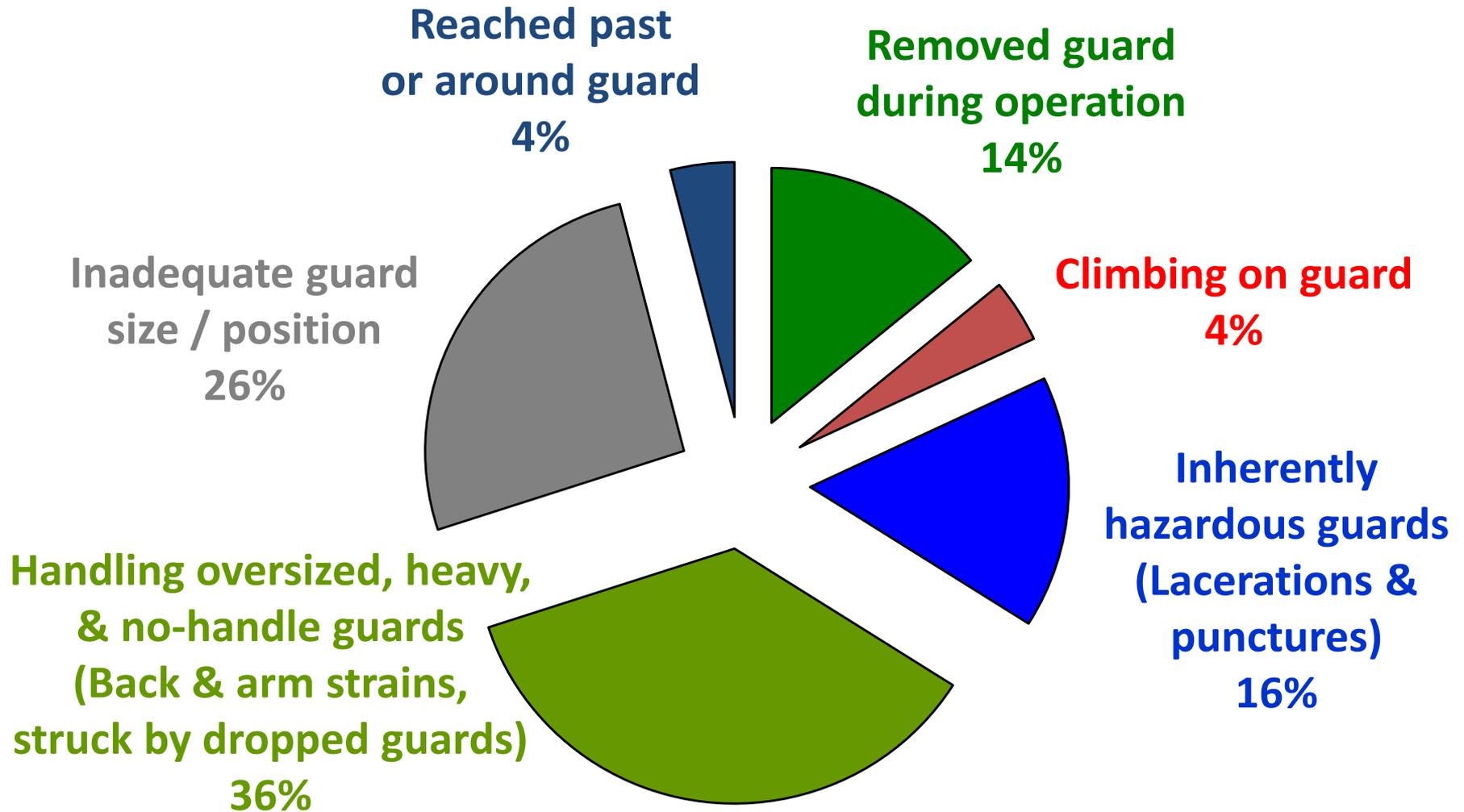
MNM Guard-Related Injuries Down

(as reported by mine operators on 7000-1)

- 2005 to 2010 – Approx. 100 injuries/year
- 2016 to 2018 YTD – Approx. 33 injuries/year
- Injuries have decreased ~67%
- Citations decreased ~42%
- Citations more consistent by district
- **However**... fatalities and permanently disabling injuries still occur. Last fatality Sept. 5, 2017.



MNM Injuries Related to Equipment Guarding (2016-18 YTD)



Several submitted questions addressed Area Guards

- The 2010 and 2012 MNM Guarding slideshows both have detailed area guarding sections
 - [Conveyors](#)
 - [Machinery](#)
- If Area Guards are being considered, recommend discussing design with MSHA district or field offices before installing
 - Some guidelines follow



Can equipment be guarded by chaining or fencing off steps and walkways?

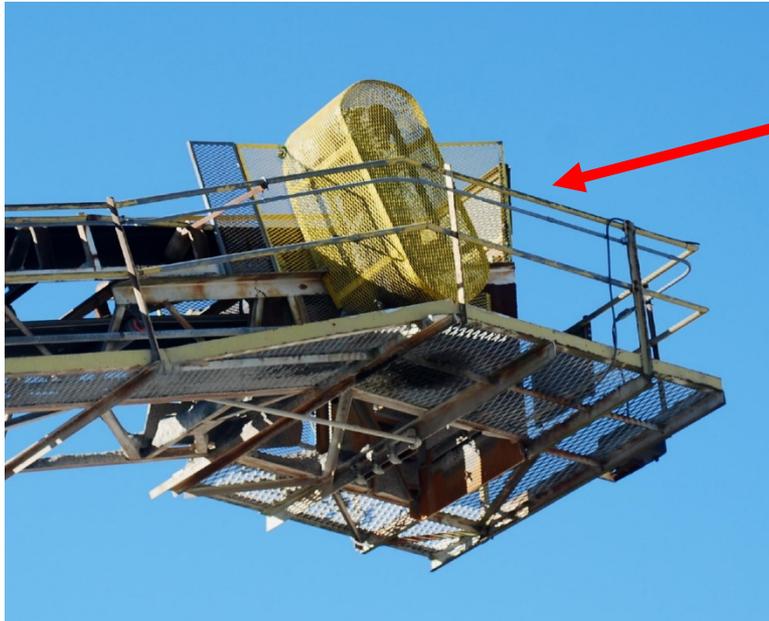


NO. This gate and sign are easily bypassed. The walkway has missing grating and leads to an unguarded rotating mill.

This guard is close to the head pulley and drive components. It is bolted or locked closed and cannot be easily bypassed. There is sufficient room to perform maintenance on the equipment. The door is hinged and opens easily; there are no large or heavy guards to handle.



How can injuries from strains, sprains and dropped guards be prevented?



This conveyor has two compliant guards; one is very large and heavy, Neither one has handles. Handling them manually at the end of this elevated conveyor risks strains, sprains and fractures. Once it is removed, there is no place to store it and work safely on the equipment.

This guard has a hinged door that is securely closed but can be opened for maintenance access. There are no heavy parts to handle or drop on someone.



Is Fencing Acceptable?

Yes, in certain situations. Fences are a form of Area Guarding. Like all guards, they need to be easily recognized as guards, substantial, durable, secure, not easily bypassed, in place when operating and well-maintained.

Only enclose one piece of equipment, not multiples or an entire plant.

The guard is compliant in its concept, but it is in violation as it stands. The gate was found open with its hinges broken and the conveyor operating.

Miners regularly entered the hazardous area during operation.

Management at this mine did not maintain the guard, install meaningful signage, properly train the workforce or enforce “No Entry” rules.



Similar guards at this mine were observed to have considerable spillage collected inside. Cleaning other than right in front of the gate required hand shoveling into wheelbarrows.



Are Area Guards Acceptable?



Yes. Like other guards, they have to be substantial, durable, not easily bypassed and maintained in place when operating. This configuration was noncompliant because the start-stop and disconnect/lockout switches (red arrows) were inside the guarded area. Also, the guards could be bypassed by climbing up the ladder from the level below.

Guard Policy, Training, Signage and Follow-up



Very small and
unspecific



Large, easily read and
specific



Discussion

