



# **Metal and Nonmetal Stakeholder Meeting**

**U.S. Department of Labor  
Mine Safety & Health Administration**

**January 13, 2016  
Arlington, VA**

# Agenda

- Introduction – Patricia Silvey, Deputy Assistant Secretary for Operations, MSHA
- Opening Remarks – Joe Main, Assistant Secretary, MSHA
- Educational Field and Small Mine Services Update – Jeffrey Duncan, Director, Educational Policy and Development, MSHA
- Stakeholder Presentation – Neal Merrifield, Administrator for Metal and Nonmetal Mine Safety and Health, MSHA; Marvin Lichtenfels, Deputy Administrator for Metal and Nonmetal Mine Safety and Health, MSHA; Hunter Prillaman, Director of Government Affairs and General Counsel, National Lime Association
- Discussion and Questions



# Introduction:

Patricia Silvey

Deputy Assistant Secretary for  
Operations, MSHA



# Opening Remarks:

Joe Main

Assistant Secretary, MSHA



# Training Update:

Jeffrey Duncan

Director, Educational Policy and  
Development, MSHA



# Mine Visits

- Nearly 7,800 mine visits in FY 2015.
- Approximately 50% were small mine operators.
- Train the trainer classes.
- Educational Field and Small Mine Services (EFSMS) explosion trailer used to provide training for coal miners in explosion hazards.
- EFSMS electrical trailer used to provide training on avoiding mine electrical hazards.



# Outreach

- EFSMS contacted:
  - Approximately 140 mining stakeholders in 42 states in FY 15.
  - Approximately 68 mining stakeholders in FY 16.
- This is an ongoing outreach effort to solicit collaboration with mining stakeholders to participate in safety initiatives.
- Joint training partnerships were formed.
- Maine Aggregate Association provided access to member mine sites and equipment for EPD to develop safety and compliance training for the aggregate mining industry.
- Working with Michigan Operating Engineers to begin development of new task training programs.



# Instructor Evaluations

Monitored and evaluated an all-time high of 953 Training Instructors to ensure:

- Training is effective;
- Materials are current;
- Training actively involves the learner;
- and
- Instructor evaluates training effectiveness.



# EFSMS Participation in MNM Initiatives

## “Fatal Reduction Initiative” – February 2015

- EFSMS specialists visited approximately **880 mines** during this initiative.

## “Fatal Reduction Initiative” - August 2015

- Status **Complete**: EFSMS specialists visited approximately **702 mines** during this initiative. This included the “Top 100” mines identified by MNM.

## “Seasonal Safety Initiative” – October 2015

- Status: **Complete**: EFSMS specialists visited approximately **771 mines** during this initiative.

## “Confined Space Initiative” - November 2015

- Status: **Complete**: EFSMS specialists visited approximately **453 mines** during this initiative.

## “Go Home For The Holidays Initiative” – December 2015

- Status: **Complete**: EFSMS specialists visited approximately **395 mines** during this initiative.



## **EFSMS Participation in MNM Initiatives**

- Approximately 3,201 mines were visited by EFSMS specialists in CY 2015 during 5 MNM initiatives beginning in February 2015.
- Approximately 45% of mines visited were small mines (10 or fewer).
- Efforts are ongoing into 2016.



Please Visit MSHA's training website at  
<http://www.msha.gov/training/>

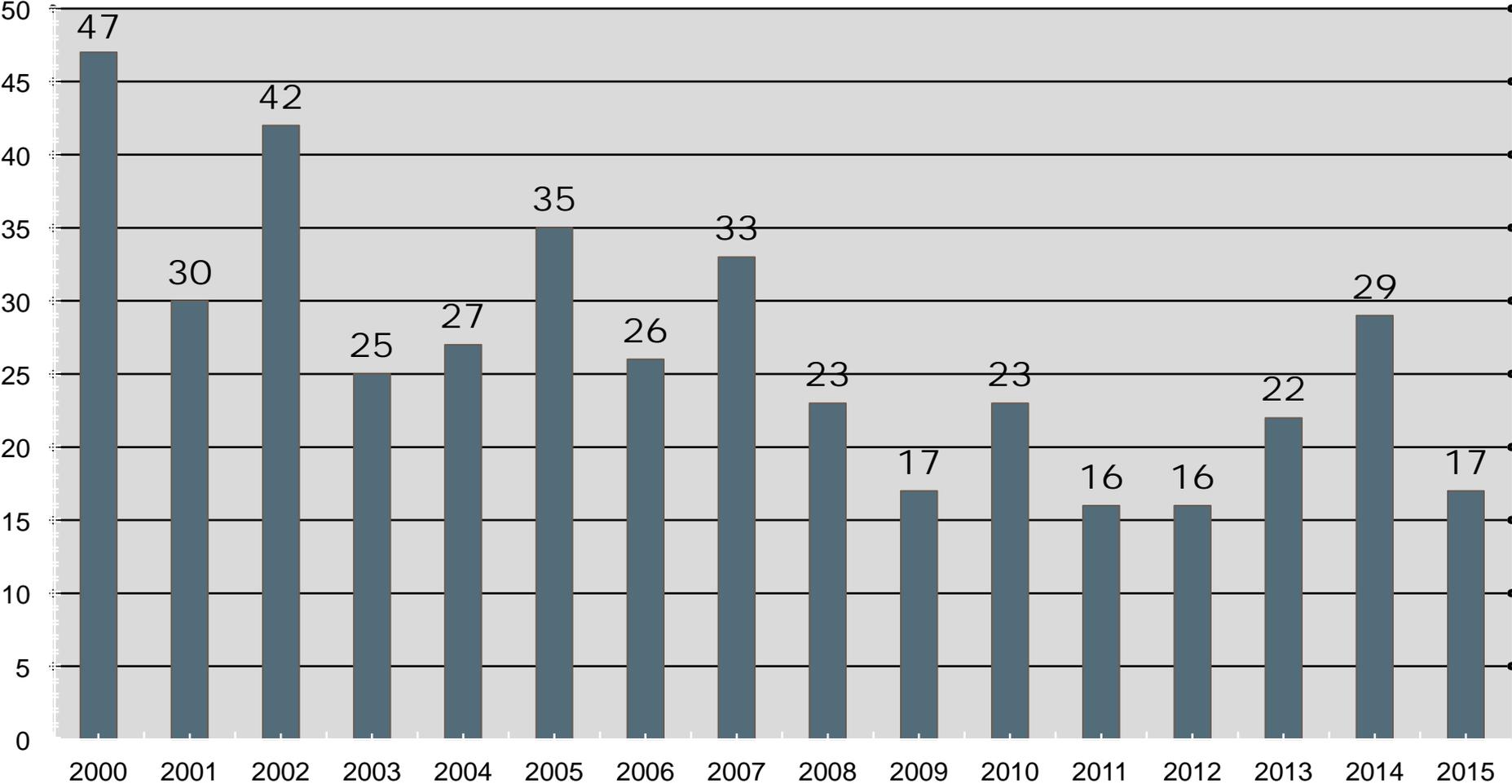


Neal Merrifield

Administrator, Metal and  
Nonmetal Mine Safety and  
Health, MSHA



# MNM Fatalities – 2000- 2015

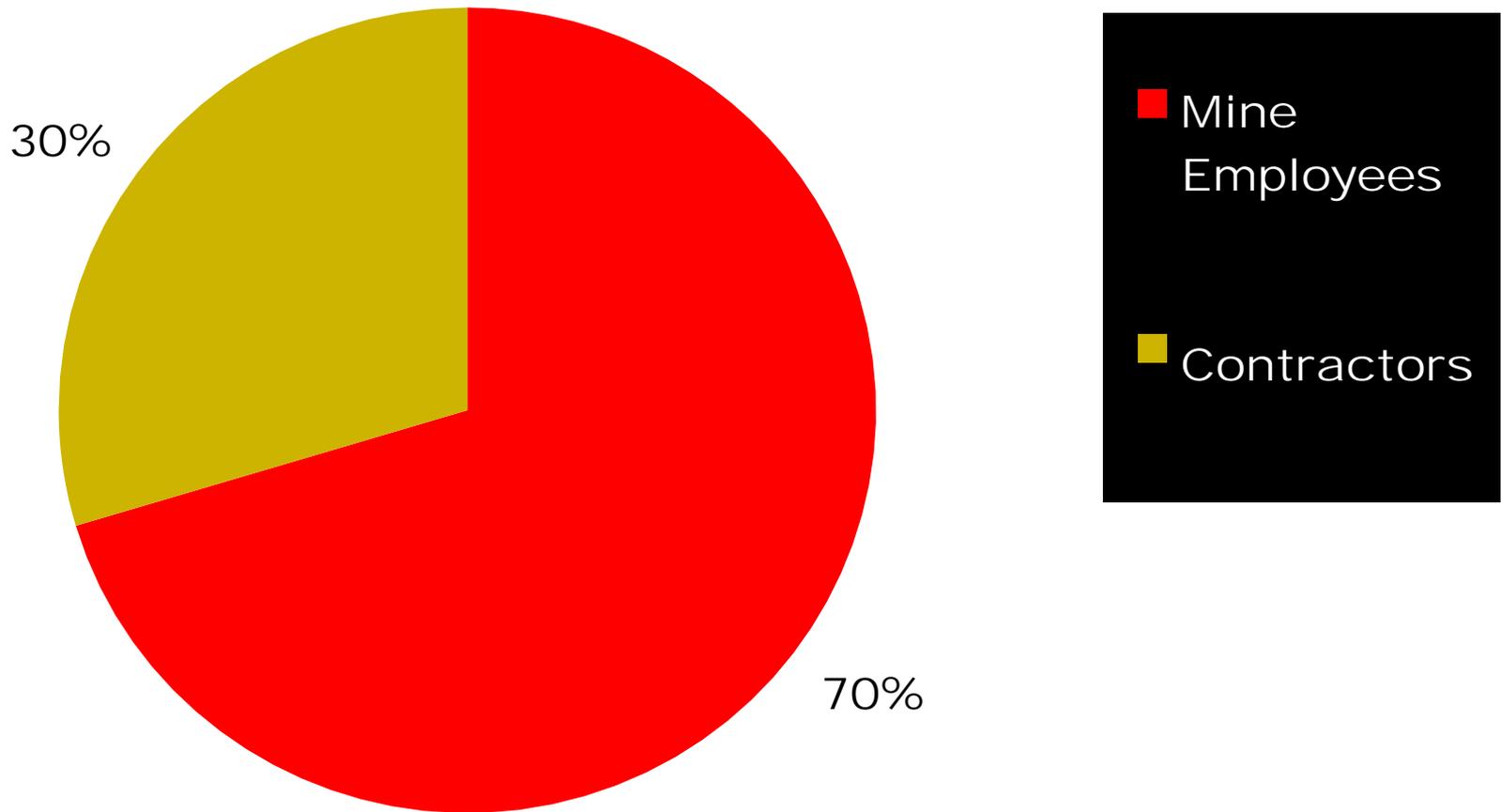


# MNM Milestones in 2015

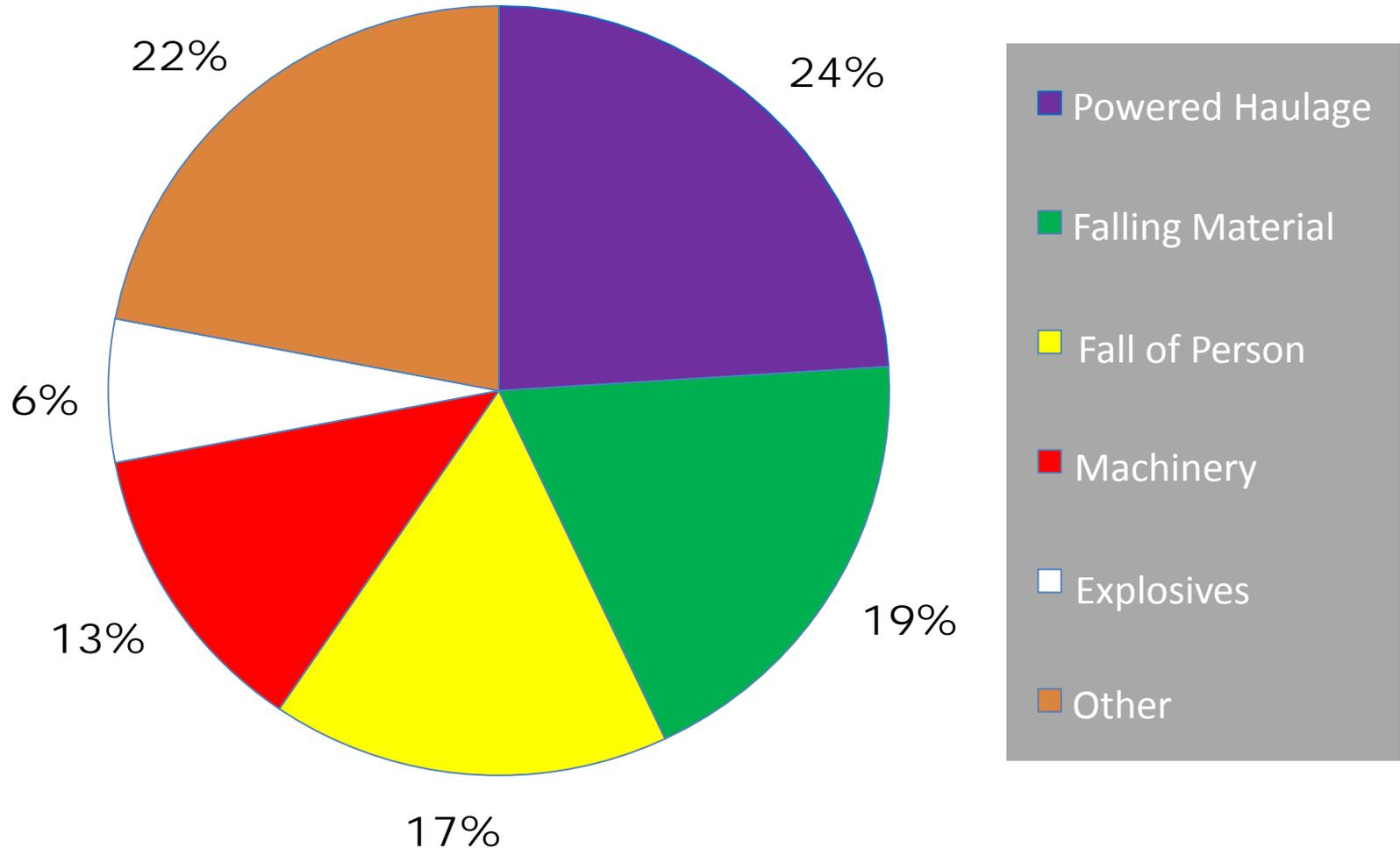
- 17 Fatalities
- 133 days with no fatalities (Aug 3-Dec 15), the longest stretch of days in MNM mining history without a single death
- Previous stretch without fatalities was 81 days (Oct 19, 2009 to Jan 9, 2010)
- First time in recorded history with no MNM mining deaths in the deadliest month of October



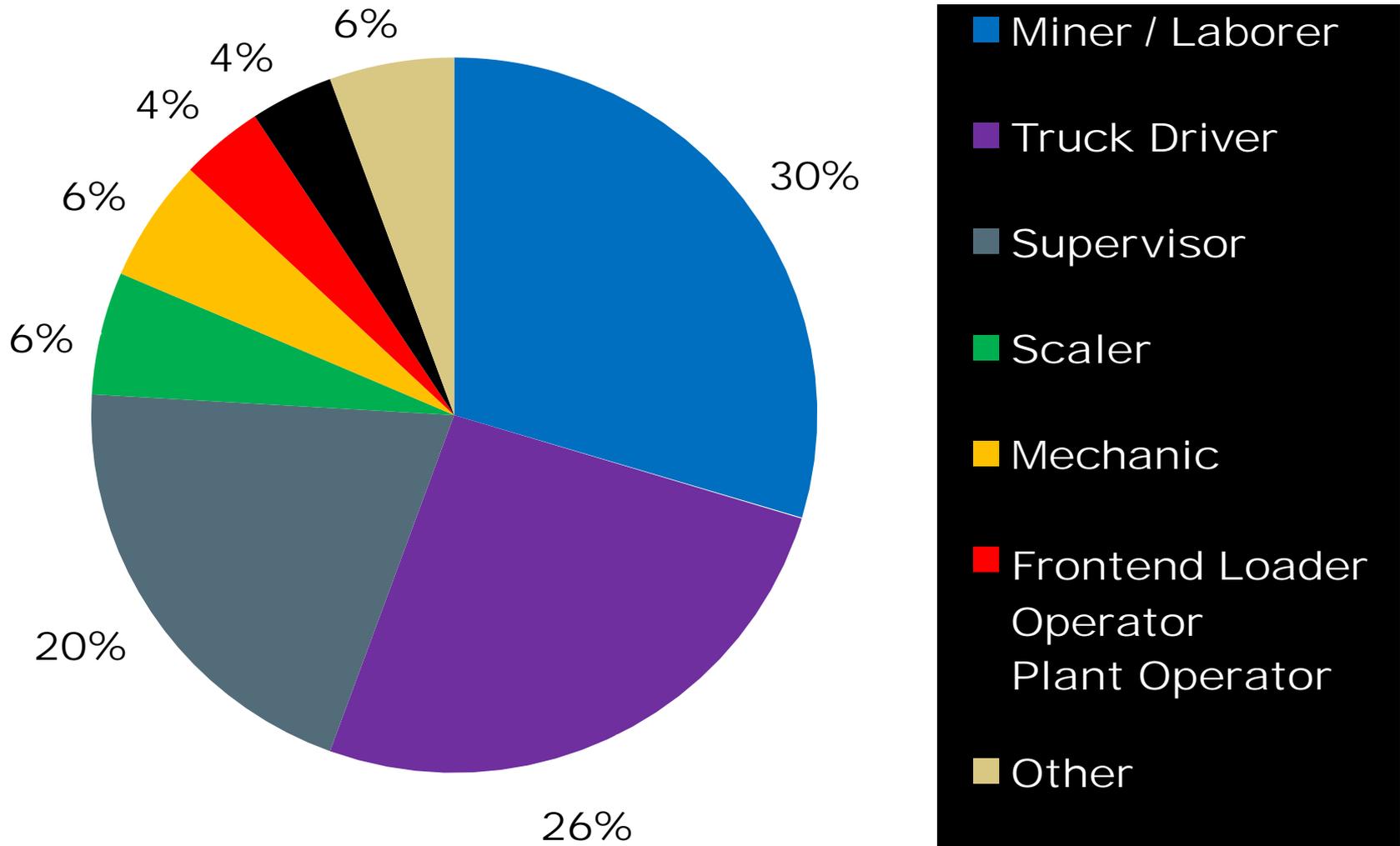
# MNM Fatalities from Oct 1, 2013 to Dec 31, 2015 (54 Fatalities)



# MNM Fatalities by Classification from Oct 1, 2013 to December 31, 2015 (54 Fatalities)

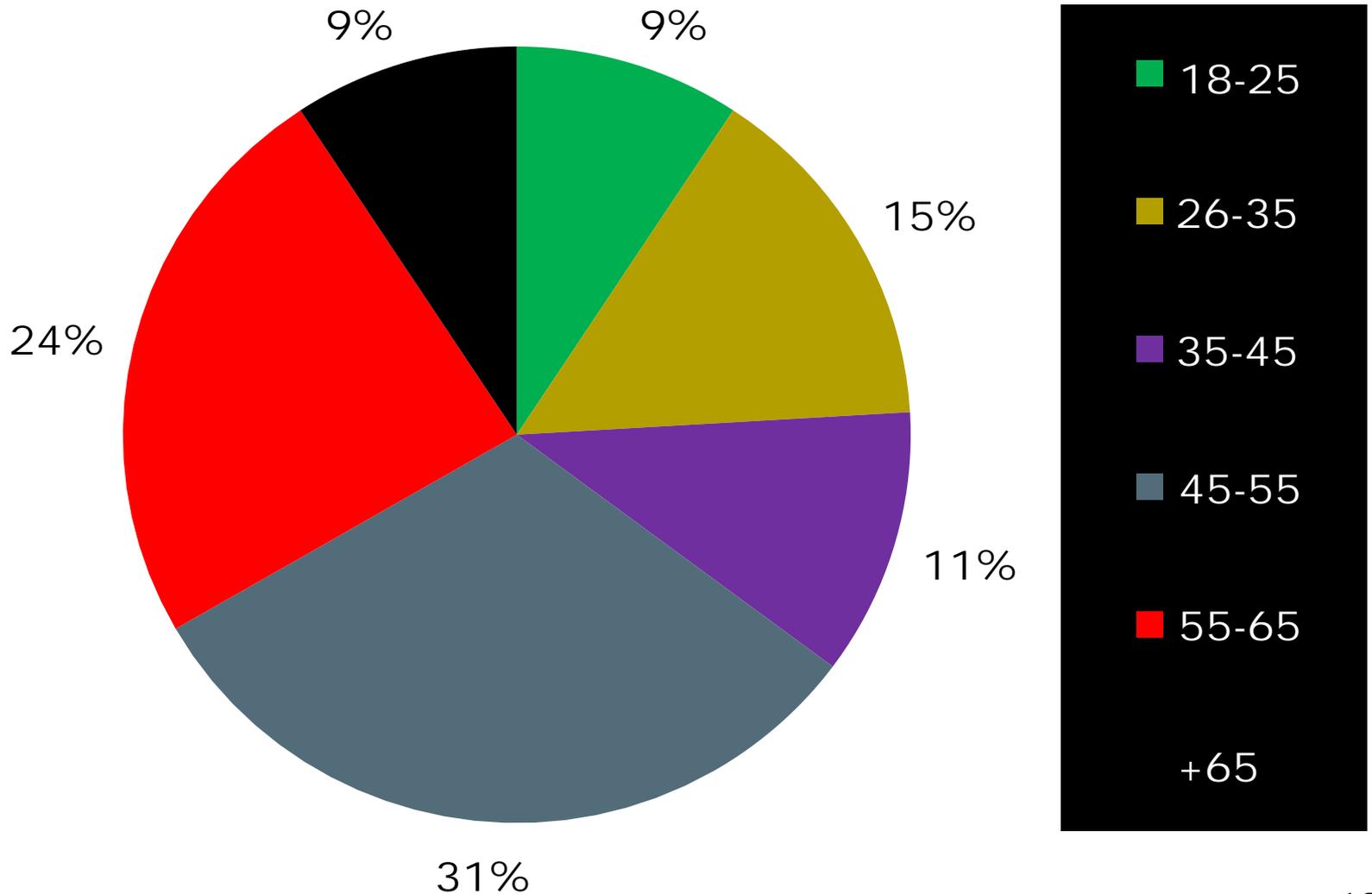


# MNM Fatalities by Occupation from Oct 1, 2013 to Dec 31, 2015 (54 Fatalities)

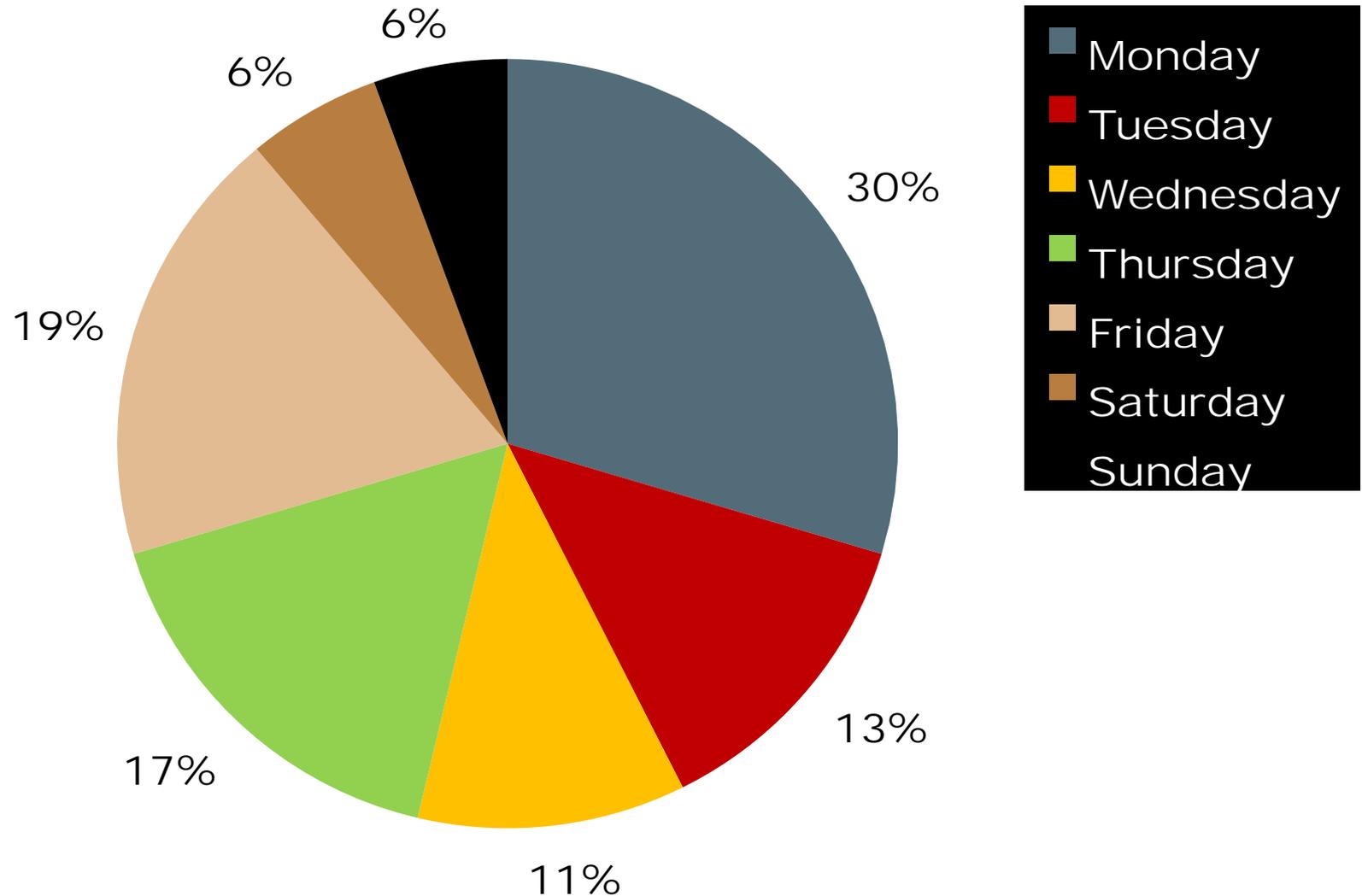


# MNM Fatalities by Age

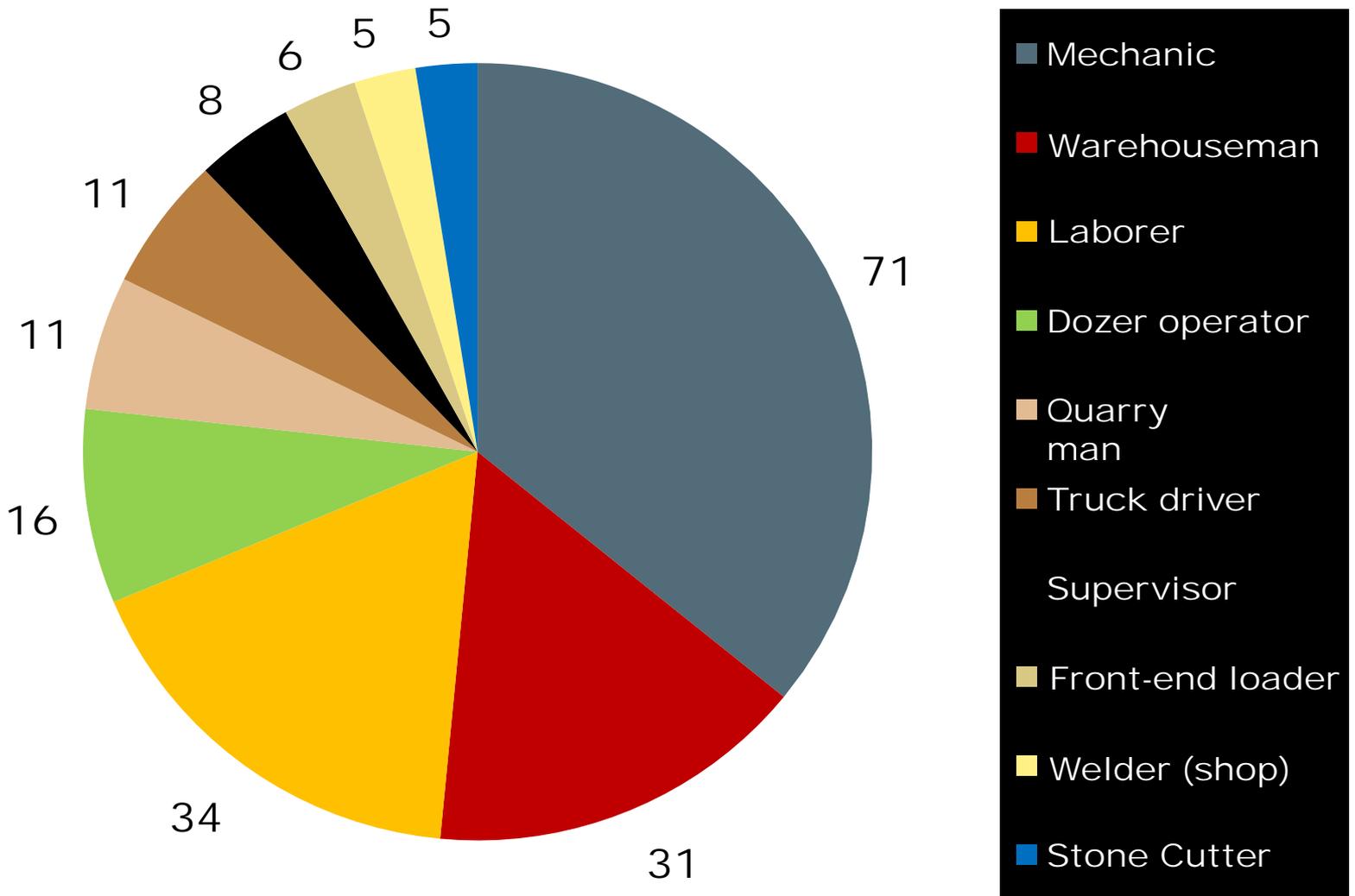
from Oct 1, 2013 to Dec 31, 2015  
(54 Fatalities)



# MNM Fatalities by Day of Week from Oct 1, 2013 to Dec 31, 2015 (54 Fatalities)



# Number of Reported MNM Totally or Partially Permanent Disabling Injuries from Jan. 1, 2011 to Dec 31, 2015 (198 Injuries)



Marvin Lichtenfels

Deputy Administrator, Metal and  
Nonmetal Mine Safety and  
Health, MSHA



# Metal and Nonmetal (MNM) Initiatives Beginning in 2014

- Increased Enforcement
- Education and Outreach
  - Accident and Fatal Information
  - Root Causes
  - Best Practices
- Quarterly, National Conference Calls with Mine Safety Trainers
- Guidance to clarify fall protection standard
- Ladder Safety Alert - February 2014



# Metal and Nonmetal Initiatives Since Aug 3, 2015

## Focused Enforcement

- Only 2 fatalities to date since August 3, 2015
- 34 Impact Inspections

## Initiatives

- |                            |               |
|----------------------------|---------------|
| • Workplace Exams          | August 2015   |
| • Seasonal Safety          | October 2015  |
| • Confined Space           | November 2015 |
| • Go Home for the Holidays | December 2015 |
| • Lock-Tag-Try             | January 2016  |



# Stakeholder Involvement

- NSSGA CEO newsletter, blog and seasonal alert to all members
- IMA/MSHA Confined Space Entry Alert
- PCA CEO newsletter

## ***Stakeholders hosting meetings with members/sending fatality reduction information***

CO Stone Sand and Gravel Assoc.

ME Aggregates Assoc.

OH Aggregates

PA Aggregates and Concrete Assoc.

MT Mining Assoc.

AK Miners Assoc.

GA Crushed Aggr. Assoc. & Ga Mining Assoc.

IN Aggregate Producers Assoc.

IL Aggregate Assoc.

MN Mine Safety Assoc.

North TX Joseph A. Holmes Assoc.

MO Mine Rescue Assoc.

WA Aggregate & Concrete Assoc.

CA Construction and Industrial Materials Assoc.

TN Mining Assoc.

SC Mining Assoc. PA

Bluestone Assoc.

KS Sunflower Safety Council

NV Mining Assoc.

NC Aggr. Assoc.

Puerto Rico Associated Industries

IA Aggregate Assoc.

MI Aggregate Assoc.

Joseph A. Holmes Assoc. of Michigan

Oklahoma Aggregate Assoc.

Kansas City Mine Rescue Assoc.

OR Concrete & Aggregate Producers Assoc.



# Examples of Stakeholders' Involvement

- **Maine Aggregates Association**, in partnership with **Maine AGC**, held a webinar to highlight near miss accidents and fatality trends.
- **Hanson Aggregates** conducted an offsite safety conference at four of their plants. MSHA presented, then Hanson Aggregates management shared the information throughout their NE region within their mine operations.
- **Lehigh Cement** distributed information within Union Bridge MD, Plant.
- **The Nyrstar** underground mine revised their confined space procedures and will review them with their contractors and mine personnel – and a Job Safety Analysis will be conducted before entering any confined spaced.
- **Vulcan** is starting mock workplace examination inspections by planting “dummy” hazards for miners to observe upon entering their workplace. By doing this, miners have found even more hazards.



# Examples of Stakeholders' Involvement

- **Lexington Quarry** started posting all fatalgrams in the break room after discussing them during safety meetings. Miners are now discussing these amongst themselves.
- **Kentucky Solite** started compiling a notebook of the 52 fatalgrams and distributed it to all miners after MSHA on-site discussions.
- **Riverside Underground** installed a new bulletin board after MSHA's safety talk that is used for the sole purpose of reminding miners to do thorough workplace examinations before starting their shift.
- **Hilltop Mining** started sending miners from one quarry to another to conduct audits after hearing MSHA's safety initiative message.
- **Pine Bluff** distributed Serious Injury and Fatality Prevention materials.



# Metal and Nonmetal Future Initiatives

- Machinery Accident Alert w/ NSSGA February 2016
- Spring Thaw Meetings March 2016 – May 2016
- 2<sup>nd</sup> Deadliest Month April 2016

## Continue What Works

- Focus Inspections
- Walk and Talks
- Near Miss alerts
- Month Initiatives
- Regional Stakeholder Meetings
  - Summer 2016 - Illinois Aggregate Association – Chicago, IL.
  - Fall 2016 - New Mexico Mining Assoc., Associated Contractors of New Mexico, and New Mexico Bureau of Mine Safety- Albuquerque, NM.



# We Must Continue to Work Together

We are asking mining associations, labor organizations, mining companies and state agencies across the country to sign on as supporters of MSHA's safety initiatives.

To sponsor a MSHA safety initiative contact MSHA's Metal and Nonmetal office at 202-693-9600.

Subscribe to MSHA email updates:

<https://public.govdelivery.com/accounts/USDOL/subscriber/session/new>



# 4<sup>th</sup> Quarter- December 2015 Fatalities

On December 15, 2015, a 75-year old tow truck laborer was killed at a cement plant. As the tow truck operator was lowering the truck's boom, the boom suddenly fell striking the victim.



# 4<sup>th</sup> Quarter- December 2015 Fatalities

On December 28, 2015, a 42-year old miner with 3 years of experience was killed at a surface gold mine. The operator of a haul truck was attempting to climb a snow covered access road. His truck slid backwards, striking the cab of the victim's haul truck, which also was recovering from sliding backwards down the same access road. A third haul truck also slid down backwards while attempting to climb the access road several minutes later, colliding with the other wrecked haul trucks.



# Serious Accident Alerts

Surface Sand and Gravel – A miner was ripping and pushing material with a dozer when he lost control of the dozer. The dozer fell from the bench he was working on to the bench below and came to a sudden stop, blade first. The miner was wearing his seatbelt, but was thrown forward into the controls.



MNM website for Serious Accidents - [msha.gov/SiteIndex/MNMSiteIndex.asp](https://www.msha.gov/SiteIndex/MNMSiteIndex.asp)



# Serious Accident Alerts

Surface Lime Mine – A miner was attempting to unclog a screw conveyor with a 3/8” poker rod while the screw conveyor was still in operation. During the process, the miner lost an arm when it became entangled in the screw conveyor.



These alerts are distributed weekly through the email server



# Serious Accident Alerts

Underground Zinc Mine – A contractor sustained crushing injuries to his pelvis area. The victim was standing next to a disabled haul truck while a load haul dump attempted to push the disabled truck out of the roadway. The haul truck turned toward the miner, pinning him between the truck and the rib.



# Serious Accident Alerts

Surface Phosphate Mine –  
A miner was injured while preparing to add a 1000 ft. cable to a junction box on a 7200 volt power circuit. The victim opened the junction box and placed the static grounding clamp assembly across the corner of the open junction box. The grounding clamp assembly fell into the junction box making contact with the energized conductors. An arc flash occurred, severely injuring the miner.



# Serious Accident Alerts

Potash Facility – A miner was entangled in the belt system while unloading a rail car into a belly dump haul truck using a portable conveyor system. The miner was released from the hospital without any apparent broken bones or lacerations. A similar accident occurred at a sand and gravel mine in 2014, however that accident resulted in a fatality.



# Serious Accident Alerts

Surface Gravel Mine – After repairing a conveyor belt, and before reinstalling the tail pulley guard, a miner started the conveyor to train the belt. While the conveyor was in motion, the miner removed a rock from the tail pulley. His right arm was caught in the smooth tail pulley assembly and badly injured.



Marvin Lichtenfels,  
Deputy Director, MNM, MSHA

*and*

Hunter Prillaman  
Director of Government Affairs and  
General Counsel,  
National Lime Association



## Lock - Tag - Try

Since 2005, 28 metal and nonmetal miners have died in electrical and machinery accidents in which power was not disconnected and locked out before work on power circuits or equipment was begun.



# Lock – Tag - Try

- MSHA and National Lime Association co-sponsors
- Alert posted on MSHA's Website
- Best Practices

Lockout - Tagout - Tryout procedures (LOTO) ensure that all energy sources are isolated before electrical or mechanical work is performed. LOTO protects miners from the dangers of uncontrolled, unplanned release of energy (movement of equipment or materials; electrical, hydraulic or pneumatic), or toxic materials.

1. Stop the equipment, disconnect power and lock the switch.
2. Attach your identifying tag.
3. Try to start the equipment or test for power.

**IT'S NOT LOCKED OUT UNTIL YOU'VE TRIED IT OUT!**

MSHA's LOTO standards address electrical and mechanical hazards

- Electrical lockout
  - 30 CFR §§56/57.12006 - Distribution boxes
  - 30 CFR §§56/57.12016 - Work on electrically powered equipment
  - 30 CFR §§56/57.12017 - Work on power circuits
- Mechanical lockout
  - 30 CFR §§56/57.14105 - Procedures during repairs or maintenance



Best practices for an effective Lock - Tag - Try Program

1. Use Lock - Tag - Try whenever:
  - Removing or bypassing a guard or other safety device for maintenance, repair, cleaning, or clearing jammed mechanisms.
  - Placing any part of one's body where it could be injured by moving machinery parts or release of stored energy (hydraulic or pneumatic pressure, steam, springs, objects that could fall or pivot), or
  - Placing any part of one's body into an electrical energy or hazardous substances danger zone.
2. Identify and control all energy sources - mechanical, electrical, hydraulic, pneumatic, gravity, chemical and thermal.
3. Identify proper lockout locations - disconnect main or circuit power sources, not on/off switches, interlocks, emergency stops or selector switches.
4. Develop machine-specific lockout procedures.
5. Each person uses his/her personal, unique lock and tag (no duplicate locks or keys.) Clearly defined group lockout systems may be used for complex jobs involving multiple miners, equipment or energy sources.
6. Each person affixes and removes his/her own lock and tag. Verify isolation. Try to operate mechanical equipment. Test for energized conditions on electrical circuits.
7. Use locks only for lockout, not for securing toolboxes or lockers.
8. Train all miners who use locks and tags on proper procedures. Train other miners who work near locked out equipment (awareness).
9. Periodically review lockout program. Add or modify procedures when new equipment is installed or procedures. Retrain miners as needed.

**Lock It Out -- Tag It Out -- Try It Out**

**It's not locked out until you've tried it out!**



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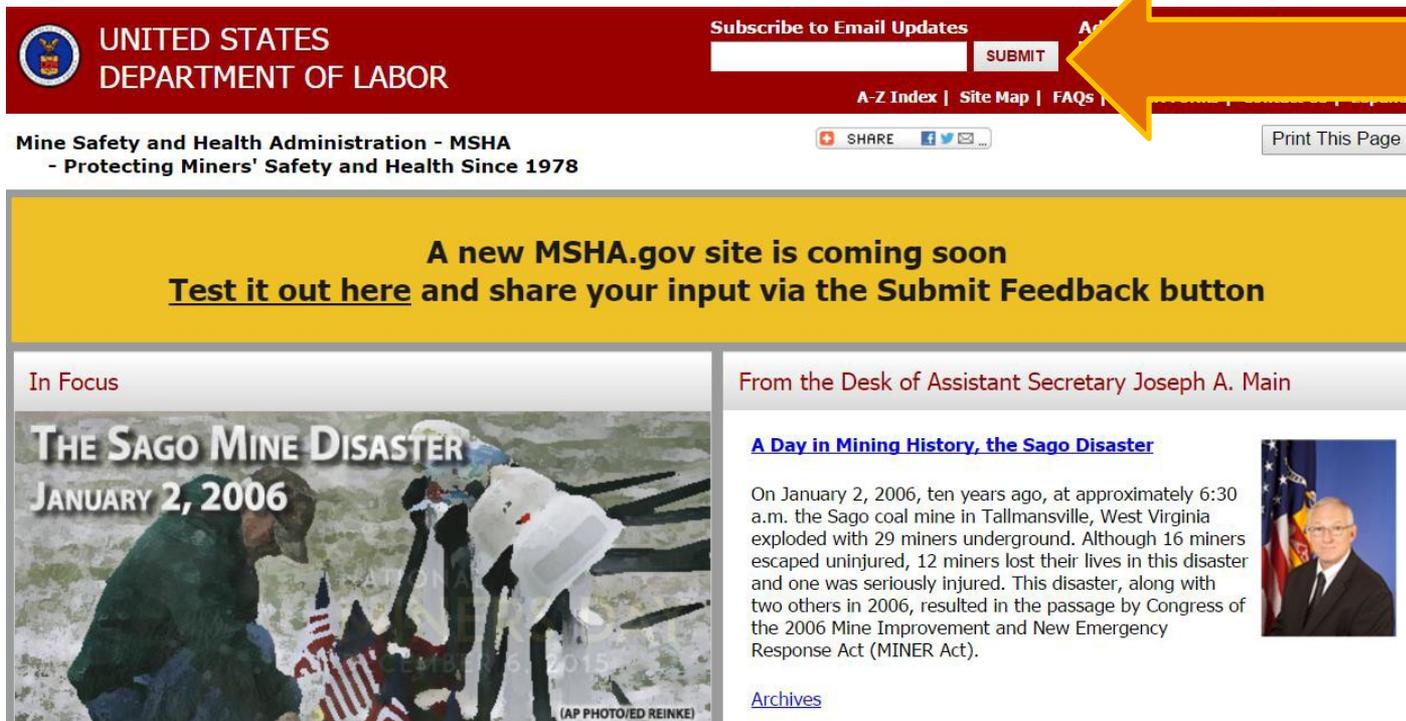


# Discussion and Questions



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UNITED STATES DEPARTMENT OF LABOR

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**In Focus**

**THE SAGO MINE DISASTER**  
**JANUARY 2, 2006**

**From the Desk of Assistant Secretary Joseph A. Main**

**[A Day in Mining History, the Sago Disaster](#)**

On January 2, 2006, ten years ago, at approximately 6:30 a.m. the Sago coal mine in Tallmansville, West Virginia exploded with 29 miners underground. Although 16 miners escaped uninjured, 12 miners lost their lives in this disaster and one was seriously injured. This disaster, along with two others in 2006, resulted in the passage by Congress of the 2006 Mine Improvement and New Emergency Response Act (MINER Act).

[Archives](#)



Call MSHA's MNM office at 202-693-9600

