

United States Department of Labor  
**Mine Safety and Health  
Administration**



**Dennis Cotton**

**Assistant District Manager**

**District 7**

**Coal Mine Safety and Health**



# *Kentucky*

## *Total Number of Mines*

|                                   | <i><u>D6</u></i> | <i><u>D7</u></i> | <i><u>D10</u></i> | <i><u>Total</u></i> |
|-----------------------------------|------------------|------------------|-------------------|---------------------|
| ■ <i>Underground</i>              | <i>44</i>        | <i>43</i>        | <i>11</i>         | <i>98</i>           |
| ■ <i>Surface</i>                  | <i>73</i>        | <i>74</i>        | <i>10</i>         | <i>157</i>          |
| ■ <i>Facilities</i>               | <i>43</i>        | <i>56</i>        | <i>15</i>         | <i>114</i>          |
| ■ <i>Total Operations</i>         | <i>160</i>       | <i>173</i>       | <i>36</i>         | <i>369</i>          |
| ■ <i>Producing Operations</i>     | <i>91</i>        | <i>105</i>       | <i>26</i>         | <i>222</i>          |
| ■ <i>Non-producing Operations</i> | <i>69</i>        | <i>68</i>        | <i>10</i>         | <i>138</i>          |

*Total Number of Miners in Kentucky - 9,291*

# Coal 2014 Fatal Accidents

- 11 Underground Mines – 5 Surface Mines
- Classifications:
  - Powered Haulage – 5
  - Machinery – 5
  - Fall of Face/Rib/Pillar/ or Highwall – 3
  - Electrical – 1
  - Fall of Roof or Back - 1
  - Other (Drowning) – 1
- Total - 16

# Coal Fatalities 2014— 9 States

## Coal 2014 Fatalities by State:

|                 |    |
|-----------------|----|
| ■ West Virginia | 5  |
| ■ Virginia      | 2  |
| ■ Kentucky      | 2  |
| ■ Wyoming       | 2  |
| ■ Indiana       | 1  |
| ■ Illinois      | 1  |
| ■ Alabama       | 1  |
| ■ Utah          | 1  |
| ■ Montana       | 1  |
| ■ Total         | 16 |

# MNMF Fatal Accidents – 2014

- Underground Mines – 6
- Surface Mines – 18
- Facilities – 5
- Classifications
  - Powered Haulage – 8
  - Slip or Fall or Person – 7
  - Falling/Sliding/Rolling Materials – 5
  - Machinery – 3
  - Fall of Rib – 2
  - Hoisting – 1
  - Electrical – 1
  - Explosion of Gas – 1
  - Other – 1
- Total - 29

# MNM Fatal Accidents by State -- 2014

- Texas – 5
- Nevada – 2
- Missouri - 2
- Virginia – 2
- Pennsylvania – 2
- Utah – 2
- South Carolina – 2
- New York – 2
- Kansas – 1
- Ohio – 1
- Montana – 1
- Illinois – 1
- Kentucky – 1
- Idaho – 1
- Indiana – 1
- Iowa – 1
- Florida – 1
- Louisiana – 1
  
- Total - 29

# MNM Fatal Accidents By Commodity -- 2014

- Sand & Gravel - 8
- Cement - 4
- Limestone - 3
- Gypsum - 2
- Lime - 2
- Sandstone - 1
- Iron Ore - 1
- Gold - 1
- Salt - 1
- Common Clay - 1
- Alumina - 1
- Fire Clay - 1
- Granite - 1
- Silica - 1
- Silver - 1
  
- Total - 29



# MNM Fatalities Nationwide CY 2015

## METAL/NONMETAL DAILY FATALITY REPORT - September 8, 2015

| FATALITIES CHARGEABLE TO THE<br>METAL/NONMETAL MINING INDUSTRY | 2011      |          | 2012      |          | 2013      |          | 2014      |           | 2015      |           |
|--|-----------|----------|-----------|----------|-----------|----------|-----------|-----------|-----------|-----------|
|  | UG        | S        | UG        | S        | UG        | S        | UG        | S         | UG        | S         |
| ELECTRICAL   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 1         | 0         | 0         |
| EXP VESSELS UNDER PRESSURE                                     | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 0         | 0         |
| EXP & BREAKING AGENTS  | 1         | 0        | 0         | 0        | 0         | 1        | 0         | 0         | 0         | 0         |
| FALL/SLIDE MATERIAL  | 0         | 1        | 0         | 2        | 1         | 1        | 0         | 3         | 0         | 3         |
| FALL OF FACE/RIB/HIGHWALL                                      | 0         | 0        | 1         | 1        | 0         | 1        | 2         | 0         | 0         | 0         |
| FALL OF ROOF OR BACK   | 2         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 1         | 0         |
| FIRE   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 0         | 0         |
| HANDLING MATERIAL  | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 0         | 0         |
| HAND TOOLS   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 0         | 0         |
| NONPOWERED HAULAGE   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 0         | 0         |
| POWERED HAULAGE  | 0         | 2        | 1         | 4        | 2         | 2        | 0         | 4         | 1         | 2         |
| HOISTING   | 0         | 0        | 0         | 0        | 0         | 0        | 1         | 0         | 1         | 0         |
| IGNITION/EXPLOSION OF GAS/DUST                                 | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 1         | 0         | 0         |
| INUNDATION   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 0         | 0         |
| MACHINERY  | 0         | 1        | 0         | 1        | 0         | 3        | 1         | 2         | 0         | 4         |
| SLIP/FALL OF PERSON  | 0         | 1        | 1         | 1        | 0         | 0        | 1         | 3         | 0         | 2         |
| STEP/KNEEL ON OBJECT   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 0         | 0         |
| STRIKING OR BUMPING  | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0         | 0         | 0         |
| OTHER  | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 1         | 0         | 1         |
| <b>YEAR TO DATE TOTALS</b>                                     | <b>3</b>  | <b>5</b> | <b>3</b>  | <b>9</b> | <b>3</b>  | <b>8</b> | <b>5</b>  | <b>15</b> | <b>3</b>  | <b>12</b> |
| <b>COMBINED YEAR TO DATE TOTALS</b>                            | <b>8</b>  |          | <b>12</b> |          | <b>11</b> |          | <b>20</b> |           | <b>15</b> |           |
| <b>END OF YEAR TOTAL</b>                                       | <b>16</b> |          | <b>16</b> |          | <b>22</b> |          | <b>29</b> |           |           |           |

# Coal Fatalities Nationwide CY 2015

## COAL DAILY FATALITY REPORT - September 8, 2015

| FATALITIES CHARGEABLE TO<br>THE COAL MINING INDUSTRY | 2011      |          | 2012      |          | 2013      |          | 2014      |          | 2015     |          |
|--|-----------|----------|-----------|----------|-----------|----------|-----------|----------|----------|----------|
|  | UG        | S        | UG        | S        | UG        | S        | UG        | S        | UG       | S        |
| ELECTRICAL   | 0         | 1        | 1         | 0        | 0         | 0        | 1         | 0        | 0        | 0        |
| EXP VESSELS UNDER PRESSURE                           | 0         | 0        | 1         | 0        | 0         | 1        | 0         | 0        | 0        | 0        |
| EXP & BREAKING AGENTS                                | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| FALL/SLIDE MATERIAL                                  | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 1        | 0        |
| FALL OF FACE/RIB/HIGHWALL                            | 2         | 0        | 1         | 0        | 1         | 0        | 2         | 0        | 2        | 0        |
| FALL OF ROOF OR BACK                                 | 1         | 0        | 1         | 0        | 2         | 0        | 0         | 0        | 1        | 0        |
| FIRE   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| HANDLING MATERIAL                                    | 0         | 0        | 1         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| HAND TOOLS   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| NONPOWERED HAULAGE                                   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| POWERED HAULAGE                                      | 2         | 1        | 1         | 1        | 4         | 0        | 1         | 1        | 1        | 1        |
| HOISTING   | 0         | 0        | 0         | 0        | 1         | 0        | 0         | 0        | 0        | 0        |
| IGNITION/EXPLOSION OF GAS/DUST                       | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| INUNDATION   | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| MACHINERY  | 2         | 2        | 1         | 1        | 1         | 3        | 3         | 1        | 1        | 1        |
| SLIP/FALL OF PERSON                                  | 0         | 1        | 1         | 2        | 0         | 0        | 0         | 0        | 0        | 0        |
| STEP/KNEEL ON OBJECT                                 | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| STRIKING OR BUMPING                                  | 0         | 0        | 0         | 0        | 0         | 0        | 0         | 0        | 0        | 0        |
| OTHER  | 0         | 0        | 0         | 1        | 0         | 1        | 0         | 1        | 0        | 0        |
| <b>YEAR TO DATE TOTALS</b>                           | <b>7</b>  | <b>5</b> | <b>8</b>  | <b>5</b> | <b>9</b>  | <b>5</b> | <b>7</b>  | <b>3</b> | <b>6</b> | <b>2</b> |
| <b>COMBINED YEAR TO DATE TOTALS</b>                  | <b>12</b> |          | <b>13</b> |          | <b>14</b> |          | <b>10</b> |          | <b>8</b> |          |
| <b>END OF YEAR TOTAL</b>                             | <b>20</b> |          | <b>20</b> |          | <b>20</b> |          | <b>16</b> |          |          |          |

# Coal Fatalities Nationwide CY 2015

## Location of Accidents

### 8 Fatal Accidents

- 6 Underground
- 2 Surface

# Coal Fatalities Nationwide CY 2015

## Accident Classification

### 8 Fatal Accidents

- 2 Machinery
- 2 Fall of Face/Rib/Highwall
- 2 Powered Haulage
- 1 Fall of Roof
- 1 Fall/Slide of Material

# Coal Fatalities Nationwide CY 2015 By State

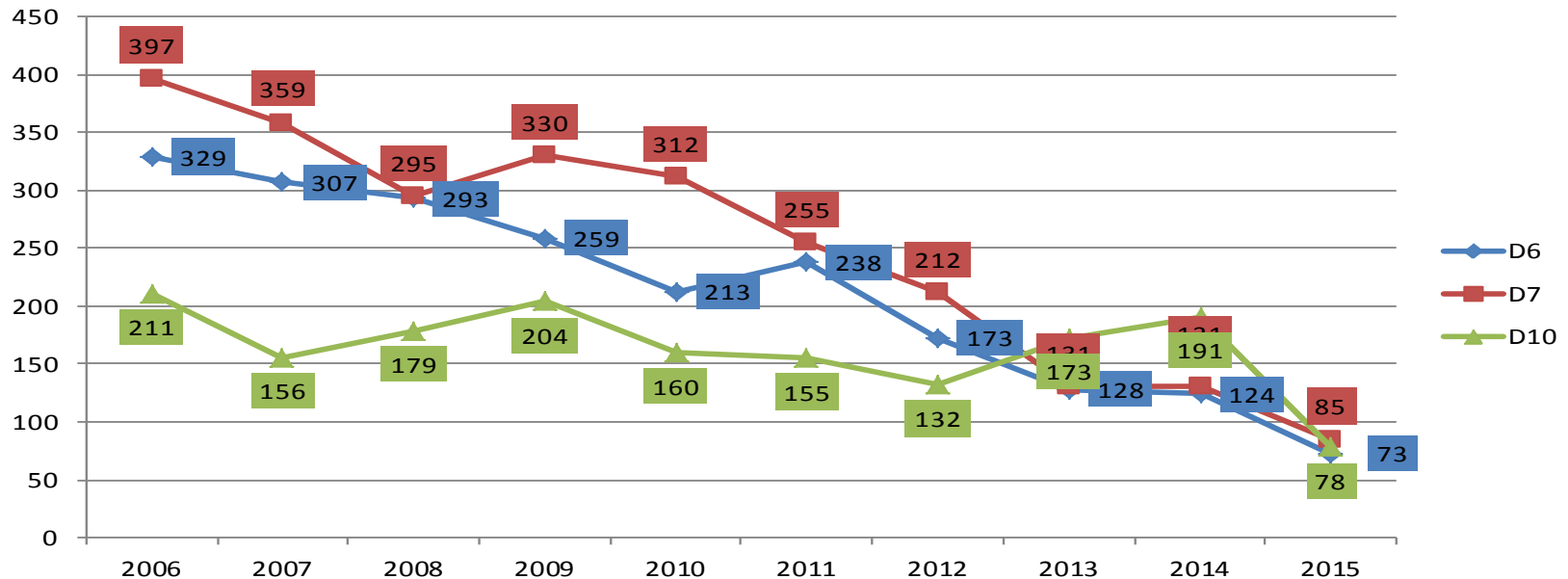
## 8 Fatal Accidents

- 3 - PA
- 2 - WV
- 1 - VA
- 1 - IL
- 1 - KY

# Kentucky Accidents 2006 – 2015

## Kentucky Accidents (Degree of Injury 2 - 5)

|               | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---------------|------|------|------|------|------|------|------|------|------|------|
| <b>D6</b>     | 329  | 307  | 293  | 259  | 213  | 238  | 173  | 128  | 124  | 73   |
| <b>D7</b>     | 397  | 359  | 295  | 330  | 312  | 255  | 212  | 131  | 131  | 85   |
| <b>D10</b>    | 211  | 156  | 179  | 204  | 160  | 155  | 132  | 173  | 191  | 78   |
| <b>Totals</b> | 937  | 822  | 767  | 793  | 685  | 648  | 517  | 432  | 446  | 236  |



## Kentucky Fatalities

|               | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---------------|------|------|------|------|------|------|------|------|------|------|
| <b>D6</b>     | 6    | 2    | 1    | 3    | 0    | 2    | 2    | 0    | 0    | 1    |
| <b>D7</b>     | 9    | 0    | 5    | 3    | 4    | 4    | 2    | 2    | 1    | 0    |
| <b>D10</b>    | 1    | 0    | 2    | 1    | 3    | 2    | 1    | 0    | 1    | 0    |
| <b>Totals</b> | 16   | 2    | 8    | 7    | 7    | 8    | 5    | 2    | 2    | 1    |

# 2015 Coal Fatality #1 – January 28, 2015

**Machinery Accident  
Hooversville, PA  
LCT Energy, LP  
Brubaker Mine**



A 43 year-old continuous mining machine operator with 10 years of mining experience was killed when he was pinned between the conveyor boom of a remote controlled continuous mining machine and a coal rib. The victim was operating the continuous mining machine from a remote position in the entry and was preparing for the next mining cycle when the accident occurred.

# 2015 Coal Fatality #2 – February 20, 2015

Fall of Roof Accident  
Heilwood, PA  
Rosebud Mining Co.  
Heilwood Mine



A 29 year-old roof bolter helper with 3 years and 48 weeks of mining experience was killed when a piece of rock approximately 3 feet wide, 11½ feet long, and 3 to 16 inches thick fell and pinned him against the top of the drill canopy of a roof bolting machine. The roof bolting machine was positioned to install the next row of permanent supports when the accident occurred.



# 2015 Coal Fatality #3 – March 8, 2015

Fall of Face/Roof  
Cameron, WV  
McElroy Coal Co.  
McElroy Mine



A 45 year old assistant longwall coordinator with twelve years of experience was killed while working on a longwall section. The victim was shoveling loose material between the longwall face and the pan line when a large piece of rock, 12 feet long by 5 feet wide by 1 foot thick, fell from the face and struck him.

# 2015 Coal Fatality #4 – March 16, 2015

Fall of Rib /Roof  
McClure, VA  
Paramont Coal Co.  
Virginia, LLC  
Deep Mine 41



A 34 year-old section foreman with 10 years of mining experience was killed when a coal/rock rib approximately 90 inches long, 45 inches high, and 15 to 18 inches thick fell and pinned him against the side of a shuttle car.

# 2015 Coal Fatality #5 – May 28, 2015

**Machinery Accident  
Phelps, Kentucky  
Apex Energy, LLC  
No. 11 Allen Br. Job**



A 45-year-old surface foreman with 27 years of experience was killed when he was crushed between the frames of a road grader and a tractor that was transporting a base power module for a highwall miner. The foreman was in the process of connecting a chain between the two machines when the road grader rolled back and crushed him.

# 2015 Coal Fatality #6 – May 31, 2015

Powered Haulage  
Coulterville, IL  
Peabody Midwest  
Mining, LLC  
Gateway Mine



A 59-year-old mine examiner with 32 years of mining experience was found unconscious, unresponsive, and lying in a travel way. The victim had been driving a diesel mantrip to travel to a set of seals to examine them. The victim was located along the east coal rib, and the front right corner of the mantrip was in contact with the west rib just inby the location of the victim.

# 2015 Coal Fatality #7 – March 17, 2015

Powered Haulage  
Scarbro, WV  
Republic Energy, Inc.  
Republic Energy Mine



A 52-year-old contract truck driver was killed while driving a fuel truck on a mine haulage road. The tandem axle truck was found on its top near the bottom of a long descending grade which included a sharp curve to the right. The fuel truck was fully loaded with approximately 3,500 gallons of diesel fuel. After interviews, investigators could not determine if the victim was wearing a seatbelt at the time of the accident.

# 2015 Coal Fatality #8 – June 27, 2015

Falling Material Accident  
Dilliner, PA  
Dana Mining Co.  
of Pennsylvania, LLC  
West Mine



Approximate location of victim;  
positioned under the airlock door

A 55-year-old scoop operator with 21 years of mining experience was killed when he was struck by a set of metal airlock doors. The victim was closing the airlock doors when the doors dislodged and fell, pinning him to the ground.

# THE TOLL OF BLACK LUNG CONTINUES

**Chester Fike**  
Born Feb. 3, 1952  
Died Dec. 18, 2012  
A victim of black lung,  
Chester died four months  
after undergoing a  
double lung transplant.

It is time to end this preventable disease

**76,000**  
deaths since  
1988

**\$45 billion**  
spent in federal  
compensation

**New cases**  
being diagnosed,  
including in young miners

A new rule issued by the U.S. Department of Labor's Mine Safety and Health Administration will greatly improve the protection of America's coal miners from this debilitating disease. The rule is the centerpiece of MSHA's initiative to End Black Lung – Act Now! To learn more, visit [www.msha.gov/endblacklung](http://www.msha.gov/endblacklung).



**MSHA**

MINE SAFETY AND HEALTH ADMINISTRATION  
UNITED STATES DEPARTMENT OF LABOR

# MSHA's Final Respirable Dust Rules Phase II Major Sections Affected

- Part 70 (Underground coal mines)
- Part 71 (Surface coal mines/facilities)
- Part 90 (Miners with lung disease)
- Section 75.350 (Belt Air Course Ventilation)



# Phase II

- Changes effective February 1, 2016

# Phase III

- Changes effective August 1, 2016

# Part 70/71/90 New Terms

- Excessive Concentration Value (ECV)
  - Refer to CPDM column of ECV tables when using a CPDM for sampling
- Other Designated Occupation (ODO)
  - Other occupation on an MMU that is designated for sampling

# Part 70/71/90 - Standards

- Base standard for underground and surface mines - 1.5 mg/m<sup>3</sup> effective August 1, 2016
- Underground mine - Intake air
  - 0.5 mg/m<sup>3</sup> effective August 1, 2016
- Part 90 miners
  - 0.5 mg/m<sup>3</sup> effective August 1, 2016

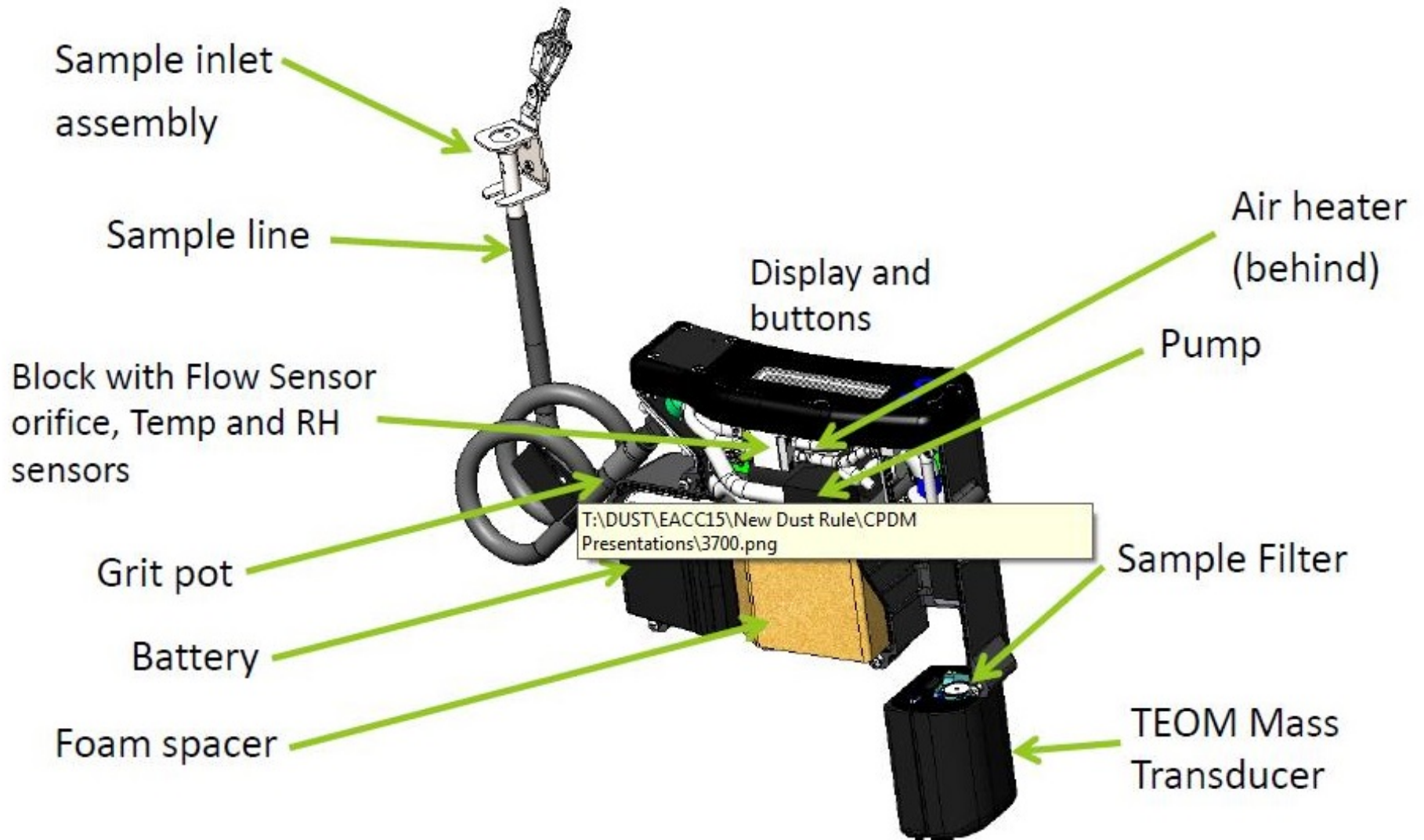
# Part 70/71/90 Sampling General

- CPDM use required after February 1, 2016
  - DO sampling
  - Other Designated Occupations (ODO) sampling (former DAs on the MMU)
  - Part 90 miners
- CMDPSU used for DA and DWP sampling unless operator notifies District Manager of use of CPDM after February 1, 2016 at least 90 days prior to intended use

# Part 70/71/90 Sampling CPDM Certification

- Persons certified by MSHA to conduct sampling with a CPDM
- Persons certified by MSHA to maintain and calibrate CPDM sampling units

# Main System Components



## CPDM Training Schedule

| Location                              | Schedule  | Contact Information   |
|---------------------------------------|---|---|
| National Mine Health & Safety Academy | May 27/28<br>June 2/3<br>July 7/8<br>July 28/29<br>August 11/12<br>August 25/26<br>September 9/10<br><u>September 22/23</u> | Contact student registration at (304) 256-3252  |
| District 2                            | 1 <sup>st</sup> and 3 <sup>rd</sup> Wednesday of each month   | Daniel Mansell<br>724-925-5150 ext. 122<br><a href="mailto:mansell.daniel@dol.gov">mansell.daniel@dol.gov</a> |
| District 3                            | Schedule available upon request   | William Spens<br>304-225-6825<br><a href="mailto:spens.william@dol.gov">spens.william@dol.gov</a>             |
| District 4                            | 2 <sup>nd</sup> Wednesday of each month   | Roy Baker<br>304-877-3900 ext. 156<br><a href="mailto:baker.roy@dol.gov">baker.roy@dol.gov</a>                |
| District 5                            | 2 <sup>nd</sup> Wednesday of each month   | Tony Arena<br>276-679-0230<br><a href="mailto:arena.tony@dol.gov">arena.tony@dol.gov</a>                      |
| District 6                            | 1 <sup>st</sup> and 3 <sup>rd</sup> Tuesday of each month   | Stevie Justice<br>606-432-0943<br><a href="mailto:justice.stevie@dol.gov">justice.stevie@dol.gov</a>          |
| District 7                            | June 11<br>July 8<br>August 12<br>2 <sup>nd</sup> Wednesday of each month thereafter  | Randy Kline<br>606-546-5123<br><a href="mailto:kline.randy@dol.gov">kline.randy@dol.gov</a>                   |
| District 8                            | 3 <sup>rd</sup> Monday of each month  | David Stepp<br>812-882-7617 ext. 137<br><a href="mailto:stepp.david@dol.gov">stepp.david@dol.gov</a>          |
| District 9                            | Please get in touch for scheduling information.   | William (Ed) Vetter<br>303-231-5586<br><a href="mailto:vetter.william@dol.gov">vetter.william@dol.gov</a>     |
| District 10                           | 1 <sup>st</sup> and 3 <sup>rd</sup> Wednesday of each month   | Hubert (Gene) Wright<br>270-821-4180<br><a href="mailto:wright.hubert@dol.gov">wright.hubert@dol.gov</a>      |
| District 11                           | 2 <sup>nd</sup> Wednesday of each month   | Russel Weekly<br>205-290-7300 ext. 287<br><a href="mailto:weekly.russel@dol.gov">weekly.russel@dol.gov</a>    |
| District 12                           | 2 <sup>nd</sup> Wednesday of each month   | Ronald Barber<br>304-256-3528<br><a href="mailto:barber.ronald@dol.gov">barber.ronald@dol.gov</a>             |

# Part 70/71/90 CPDM Sampling Certification

- Re-certified every 3 years
- MSHA may revoke certification
- Certified in sampling may collect samples
- Certified in Maintenance can work on sampling units
  - Maintenance certification not cover sampling duties



# Part 70

## Quarterly Sampling – MMU

(effective February 1, 2016)

- Conducted with CPDM unless notified
- Sample DO consecutive shifts until 15 valid samples collected
  - Additional 15 shift groups may be required
    - District Manager discretion
    - Required if found not following approved ventilation plan

# Part 70

## Quarterly Sampling - MMU

- Sample ODOs (includes former DAs on MMU) consecutive shifts until 15 valid samples collected
  - ODO sampling not start until DO sampling complete
  - Different ODO types sampled over separate time period during quarter
    - Example: RB sampled over 15 shifts after DO 15 shift sampling complete
    - Example: SCs sampled over 15 shifts after the DO 15 shift sampling and the RB 15 shift sampling is complete

# Part 70

## Quarterly Sampling - MMU

- DOs, ODOs to be sampled specified in rule
- Other ODOs may be designated by the DM
- New reduced standard due to quartz will be effective 7 calendar days after the date of notification
- Samples exceeding applicable standard by  $0.1 \text{ mg/m}^3$  or more will be used regardless of production

# Part 70

## Quarterly Sampling – DAs

(effective February 1, 2016)

- Sample each DA 5 consecutive shifts each quarter
  - No consecutive days cycle
- Quartz present – resulting in reduced standard
  - New standard effective 7 calendar days after date of notification

# Part 71

## DWP Sampling

- Continues as specified effective August 1, 2014 except that DWP sampling May be performed using the CPDM with notification to the District manager

# Part 90 Sampling Compliance

- Requirements for Part 90 samples effective August 1, 2014 continue except that All Part 90 samples must be collected using a CPDM effective February 1, 2016

# Part 70/71/90

## Transmission of CPDM Sample Data

- CPDM
  - Mine official validate, certify and transmit electronically within 24 hours after end of sampling shift
    - Sample data file
    - Sample status conditions file
  - Operator maintain data files at least 12 months
  - Not tamper with CPDM or alter any data files

# Part 70/71

## Report and Posting

### ■ CPDM

- End-of-shift sample results – operator post within 12 hours after end of sampling shift
- Information remain posted until receipt of MSHA provided samples report
- MSHA sample results report posted at least 31 days



# Part 75 – 75.350

## Belt Air Course Ventilation

- Belt air used as intake air on MMU
  - Standard reduced to  $0.5 \text{ mg/m}^3$  effective August 1, 2016
  - If a reduced standard is applicable on the working section that is less than the  $0.5 \text{ mg/m}^3$  standard, then the lowest applicable standard applies to the belt entry

# PROXIMITY DETECTION SYSTEMS FOR CONTINUOUS MINING MACHINES IN UNDERGROUND COAL MINES

## RULE & COMPLIANCE

The rule became effective on March 16, 2015

<http://www.msha.gov/regs/fedreg/final/2015/proximity-detection/>

# Accident Data

- To assess the costs and benefits of the final rule, MSHA conducted a review of fatal and nonfatal pinning, crushing, and striking accidents, which occurred in underground coal mines from 1984 through 2013.
- Of the 75 preventable fatalities resulting from pinning, crushing, and striking accidents, 34 of those were associated with continuous mining machines (CMMs).
- During this same time period, MSHA estimated that the use of a proximity detection system could have prevented 238 nonfatal injuries associated with CMMs.
- Since 2010, 8 miners working in close proximity to CMMs died from pinning, crushing, or striking accidents.
- MSHA projects that the rule will prevent approximately 49 injuries and 9 deaths over the next 10 years.

# Proximity Detection System Requirements

## §75.1732

- Operators must install a proximity detection system on certain CMMs.
  - (a) *Machines covered.* Operators must equip continuous mining machines, except full-face continuous mining machines, with proximity detection systems by the following dates. For proximity detection systems with miner-wearable components, the mine operator must provide a miner-wearable component to be worn by each miner on the working section by the following dates.

# Machines Covered

## §75.1732 (a)

- (1) Continuous mining machines manufactured after March 16, 2015 must meet the requirements in §75.1732 no later than November 16, 2015. These machines must meet these requirements when placed in service with a proximity detection system.
- (2) Continuous mining machines manufactured and equipped with a proximity detection system on or before March 16, 2015 must meet the requirements in §75.1732 no later than September 16, 2016.
- (3) Continuous mining machines manufactured and not equipped with a proximity detection system on or before March 16, 2015 must meet the requirements in §75.1732 no later than March 16, 2018. These machines must meet these requirements when placed in service with a proximity detection system.

MSHA interprets the March 16, 2018 date to also apply to continuous mining machines with an existing proximity detection system that requires the installation of a new proximity detection system to meet the requirements of the rule. For these machines, MSHA anticipates that the new proximity detection system will be installed during the first planned rebuild.

See Program Policy Letter, P15-V-01.

# Proximity Detection System Requirements

## §75.1732 (b)

(b) *Requirements for a proximity detection system.* A proximity detection system includes machine-mounted components and miner-wearable components. The system must:

- (1) Cause a machine, which is tramping from place-to-place or repositioning, to stop before contacting a miner except for a miner who is in the on-board operator's compartment;
- (2) Provide an audible and visual warning signal on the miner-wearable component and a visual warning signal on the machine that alert miners before the system causes a machine to stop. These warning signals must be distinguishable from other signals;
- (3) Provide a visual signal on the machine that indicates the machine-mounted components are functioning properly;

# MSHA Approved Proximity Detection Systems

- Two MSHA-approved systems provide an audible and visual warning signal on the miner-wearable component and a visual warning signal on the machine that alert miners before the system causes a machine to stop, as required by the final rule.
  - Strata Mining Products HazardAvert® System
  - Matrix Design Group IntelliZone™ /Joy Global SmartZone® Proximity System Generation 2
- As of January 2015, approximately 425 out of 863 CMMs were equipped with a proximity detection system.

# Proximity Detection System Requirements

## §75.1732 (b)

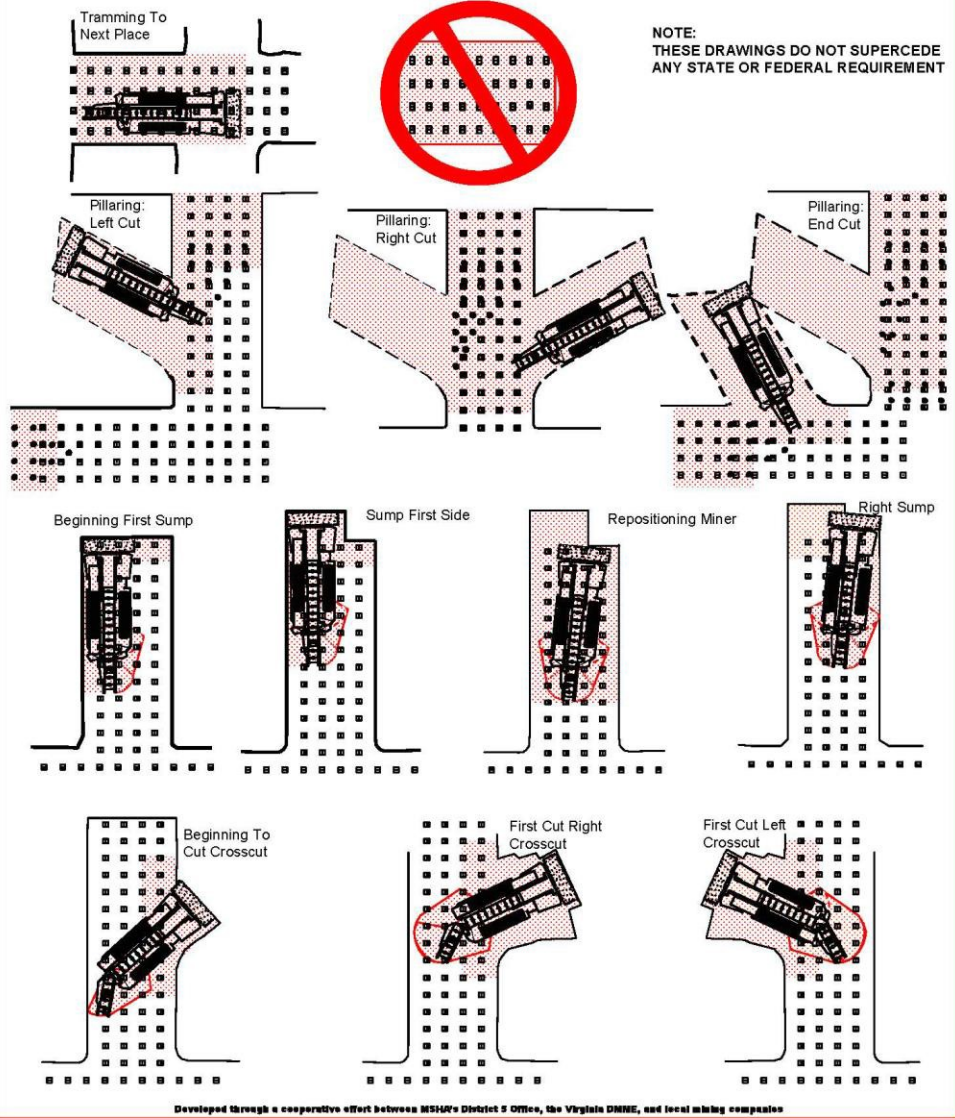
- (4) Prevent movement of the machine if any machine-mounted component of the system is not functioning properly. However, a system with any machine-mounted component that is not functioning properly may allow machine movement if it provides an audible or visual warning signal, distinguishable from other signals, during movement. Such movement is permitted only for purposes of relocating the machine from an unsafe location for repair;
- (5) Be installed to prevent interference that adversely affects performance of any electrical system; and
- (6) Be installed and maintained in proper operating condition by a person trained in the installation and maintenance of the system.



# RED ZONES ARE NO ZONES

FOR

## MINING WITH REMOTE CONTROL CONTINUOUS MINERS



Developed through a cooperative effort between MSHA's District 5 Office, the Virginia DMME, and local mining companies

# Education and Training Resources

- To access this resource, go to <http://www.msha.gov/training/> and click the link for The “new” Part 50 Training Program beneath the "Training Program and Courses" heading.



### New Part 50 Training Program

Welcome to the online training course for the **New Part 50 Training Program**. The program is designed to clarify reporting requirements for accidents, injuries, and illnesses in the mining industry. This program will enhance MSHA's ability to evaluate and develop mine safety and health standards and programs which benefit the industry.

#### Why is it important for mine operators to report accidents, injuries, and illnesses?

**Accidents, injuries, and illnesses are key indicators of the effectiveness of the operator's health and safety program.**

**Note:** The material in this training course is for informational purposes only and is not intended to be an all-inclusive source for 30 CFR Part 50.



Click Next to Continue

# Part 50 Training Program

- The goal of the *new* Part 50 Training Program is....
  - for mine operators and contractors to properly report accidents, injuries, illnesses, and employment data
  - more accurately identify problem areas
  - generate the best corrective actions possible to prevent recurrence and
  - enhance both MSHA and mine operators ability to develop programs to benefit the health and safety of miners

Accidents, injuries, and illnesses are key indicators of the effectiveness of the operator's health and safety program.

# Trainer's Page

## <http://www.msha.gov/training>



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
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MINE SAFETY AND HEALTH ADMINISTRATION

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Training is an essential part of MSHA's mission to keep miners safe and healthy. Our goal is to help the mining industry develop high-quality training programs, and to strengthen and modernize training through collaboration with industry stakeholders. Federal law requires that all miners receive basic and annual refresher training, and that all mine operators maintain an effective training plan. MSHA provides materials, guidance, and hands-on assistance to help miners and operators meet their training obligations and more. We have gathered many of our materials on this page for your convenience, and will add to them over time.

Questions? Comments? Materials to share? Please contact us at [mshatraining@dol.gov](mailto:mshatraining@dol.gov) for assistance or to suggest improvements to the training page.

**Part 48 or Part 46? Learn what it means here.**

### Spotlight

23  
JUL

#### Materials for 2<sup>nd</sup> quarter 2015 conference call

Slideshow with information on training materials, and fatal accidents and near-misses from Coal and Metal/Nonmetal.

29  
APR

#### Materials for 1<sup>st</sup> quarter 2015 conference call

Slideshow with information on training materials, and fatal accidents and near-misses from Coal and Metal/Nonmetal.

27  
JAN

#### Materials for quarterly conference call

Slideshow with presentations on new training materials, and fatal accidents and near-misses from Coal and Metal/Nonmetal.

14  
NOV

#### Recording of 3rd quarter conference call

Listen to a one-hour MSHA call with trainers, held Nov. 13, regarding recent fatalities and training resources.

13  
NOV

#### Materials for 3rd quarter conference call

Slideshows on **Coal fatalities**, **MNM fatalities**, and **EPD presentation on task training and adult learning**.

### Develop a Training Plan

The following resources may be useful in developing training plans for Part 46 and Part 48 mines. If this is your first time creating a training plan, we highly recommend getting in touch with **Educational Field and Small Mine Services** for assistance. You can also review the most current regulations set forth in 30 CFR **Part 46** and **Part 48**. The official regulations outline the required components of an approved training plan, the types of training programs that must be included in a plan, and appropriate record-keeping procedures.

Review the most current regulations: **Part 46** | **Part 48**

#### MSHA Training Plan Advisor

Provides guidance in developing federally required training plans for Part 46 and Part 48 mines, and allows plans to be submitted online.

#### MSHA Program Policy Manual

# Pattern of Violations Single Source Page



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Mine Safety and Health Administration - MSHA  
- Protecting Miners' Safety and Health Since 1978

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## Pattern of Violations

The Mine Act places the responsibility for ensuring the health and safety of miners on mine operators. Congress enacted the [pattern of violations \(POV\) provision](#) to provide MSHA with an additional enforcement tool when other tools had proven ineffective. Congress intended MSHA to use the POV provision to restore safe and healthful conditions at mines with a pattern of significant and substantial (S&S) violations. The legislative history states that Congress believed the existence of a pattern would signal to both the mine operator and the Secretary that "there is a need to restore the mine to effective safe and healthful conditions and that the mere abatement of violations as they are cited is insufficient."

A mine operator that has a pattern of S&S violations at a mine will receive written notice from MSHA. For each subsequent S&S violation, MSHA will issue an order withdrawing miners from the affected area until the cited condition has been corrected. MSHA will terminate an operator's POV notice when 1) an inspection of the entire mine is completed and no S&S violations are found or 2) no withdrawal order is issued by MSHA in accordance with Section 104(e)(1) of the Mine Act within 90 days of the issuance of the pattern notice.

Mine operators can determine whether they may be subject to a POV notice by using MSHA's [Pattern of Violations Monitoring Tool](#). It is the responsibility of mine operators to track their violation and injury histories to determine whether they need to take action to avoid triggering a POV notice. Operators who are at risk of receiving a POV notice are encouraged to implement a corrective action program to reduce S&S violations. More information about corrective action programs can be found in MSHA's [Pattern of Violations Procedures Summary](#).

### Tools for You

- **Monthly Monitoring Tool for Pattern of Violations**

Enter an MSHA Mine ID :  (7 Digits - No Dash)

If you do not know the Mine ID, please use the [Data Retrieval System](#).

- **S&S Rate Calculator**

The [S&S Rate Calculator](#) is a tool for mine operators that implement a Corrective Action Program (CAP) with goals for reductions in a mine's rate of Significant and Substantial (S&S) violations to determine if a mine is meeting its goals. The data for this application *is refreshed daily*.

**QUESTIONS???**