



Training Resources

Applied to

Mining

Beckley, WV

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MSHA: General Update

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The MSHA Mission

“to prevent death, illness, and injury from mining and promote safe and healthful workplaces for U.S. miners”

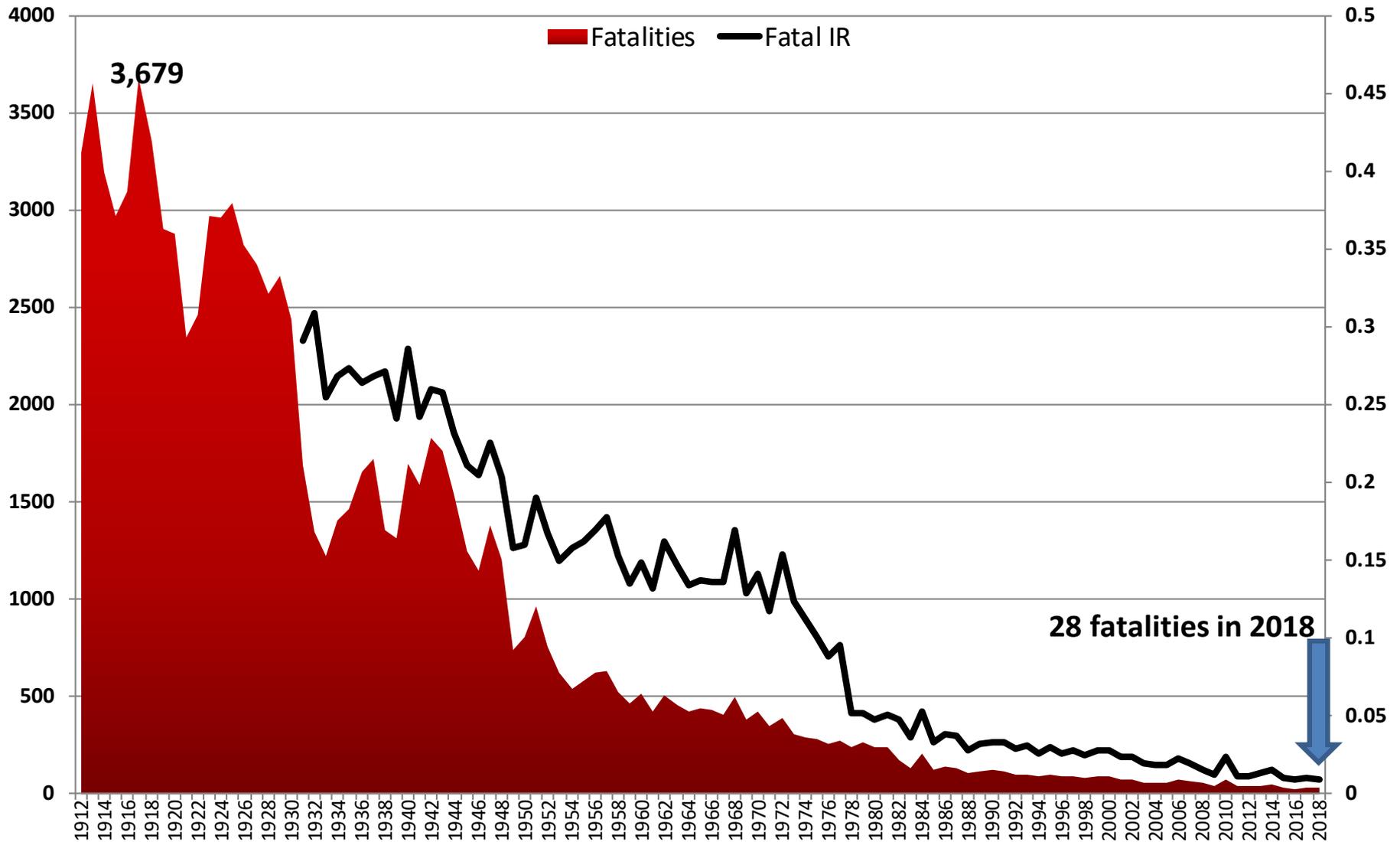


MSHA's Tools

- Fair and consistent enforcement, including mandated inspections
- Compliance and technical assistance
- Training and education
- Rulemaking and policy guidance



U.S. Mining Fatalities 1912-2018





MSHA Data for 2018

# of Mines Reporting Employment	13,055
- Coal Mines Only	1,192
- Metal/Nonmetal Mines Only	11,863
Total Industry Employment (including contractors)	331,933
MSHA Inspections/Employees	37,000/1900
Citations & Orders Issued	97,788
Dollars Assessed (millions)	\$54.5



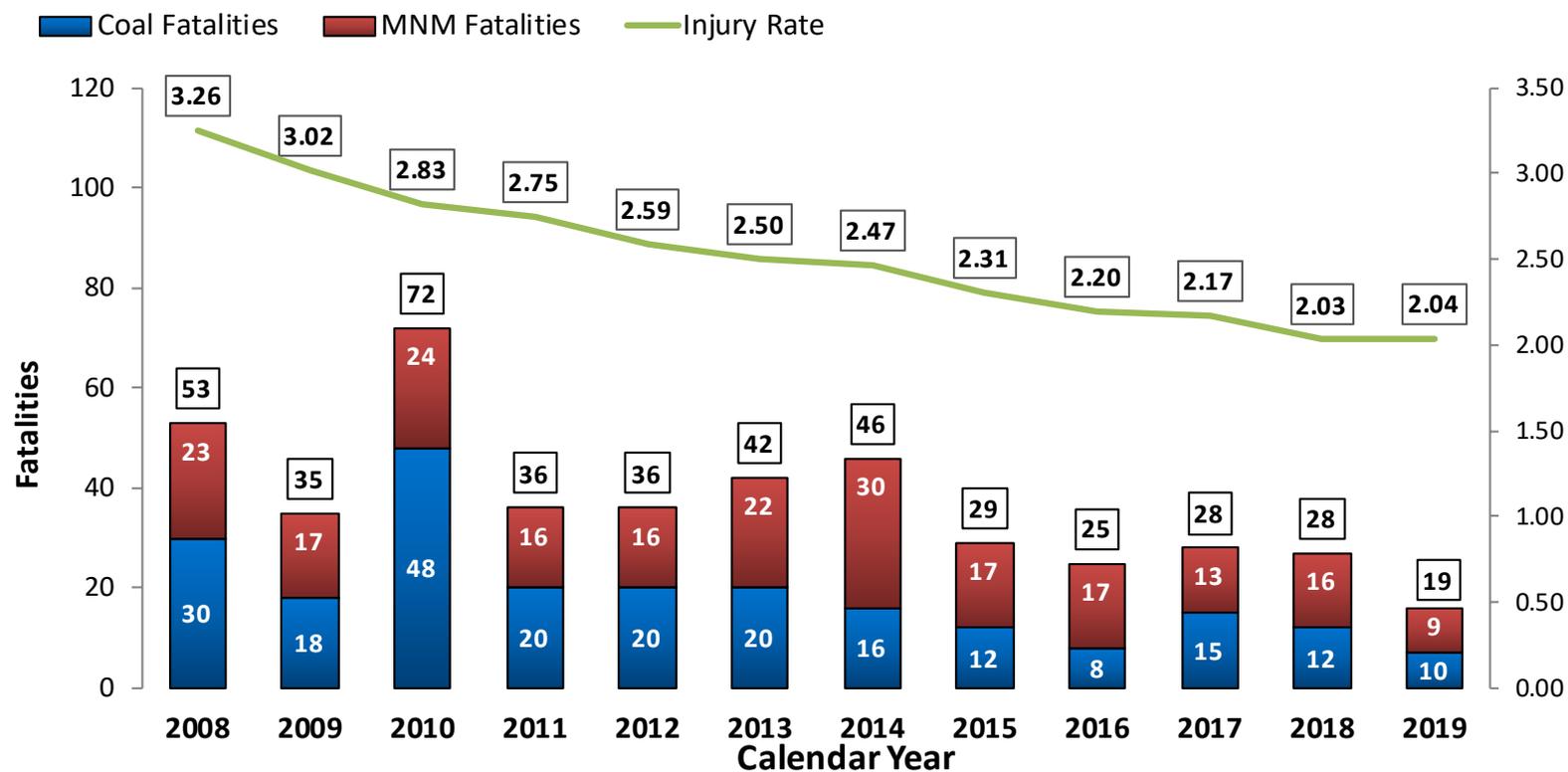
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MSHA's Mine Portfolio

Mine Type	Number of Mines	Share of Total
UG Coal Only	411	2.8%
UG MNM Only	239	1.6%
UG Total	650	4.5%
All Surface	12,405	85.2%
Facilities Only	852	5.9%



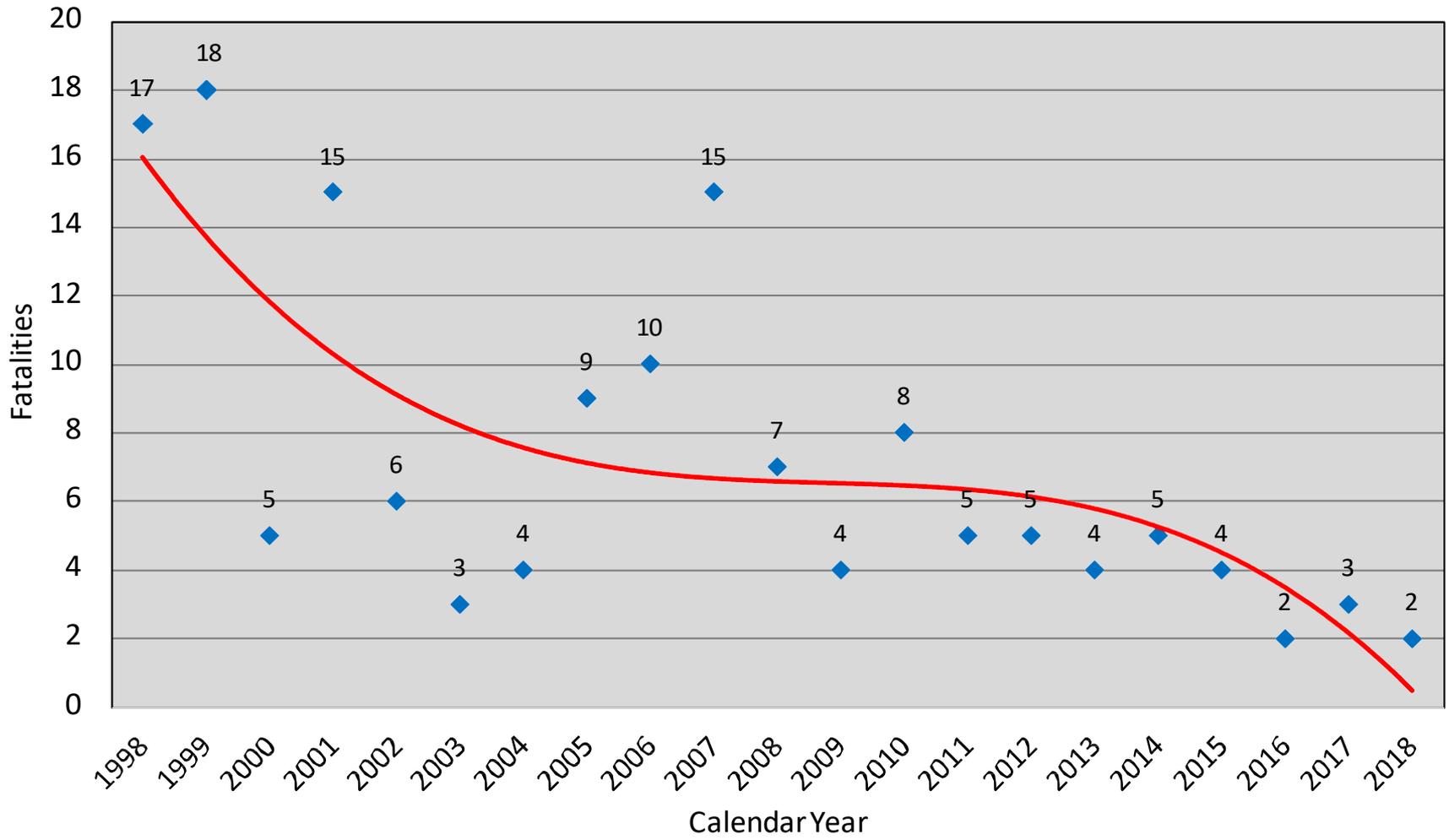
Mining Injury Rates & Fatalities 2008-2019



Fatality data as of 10/7/2019

Injury rate data as of 6/30/2019 – 200,000 hour basis

U.S. MINING INDUSTRY FATALITIES FALL OF ROOF & RIB (1998-2018)

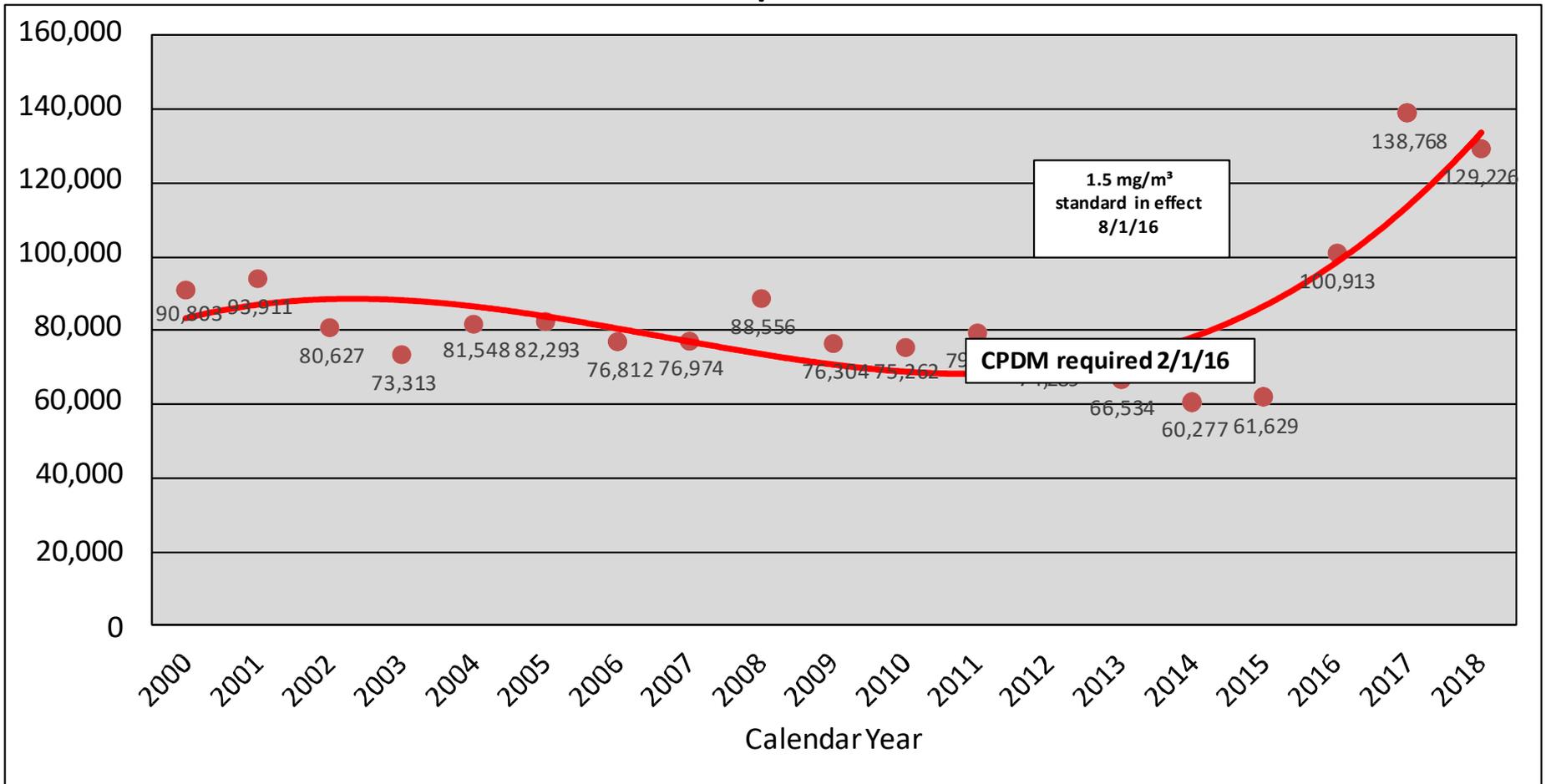


Dust Sampling Trends

- Increased sampling of key positions in coal mines was mandated by 2014 dust rule
- What trends are we seeing?

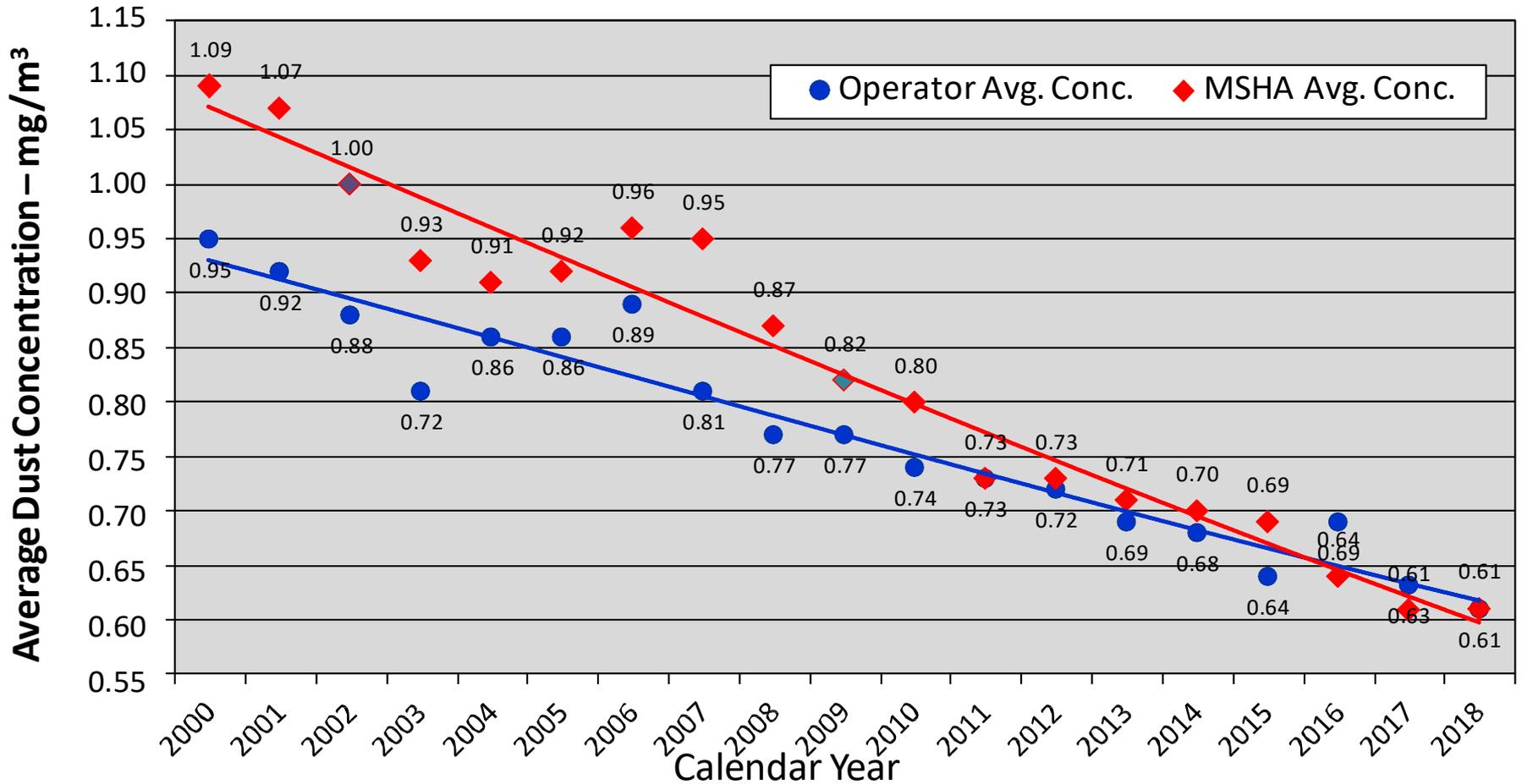


Coal - Number of Valid MSHA & Operator Respirable Dust Samples



Data as of 1/30/2019

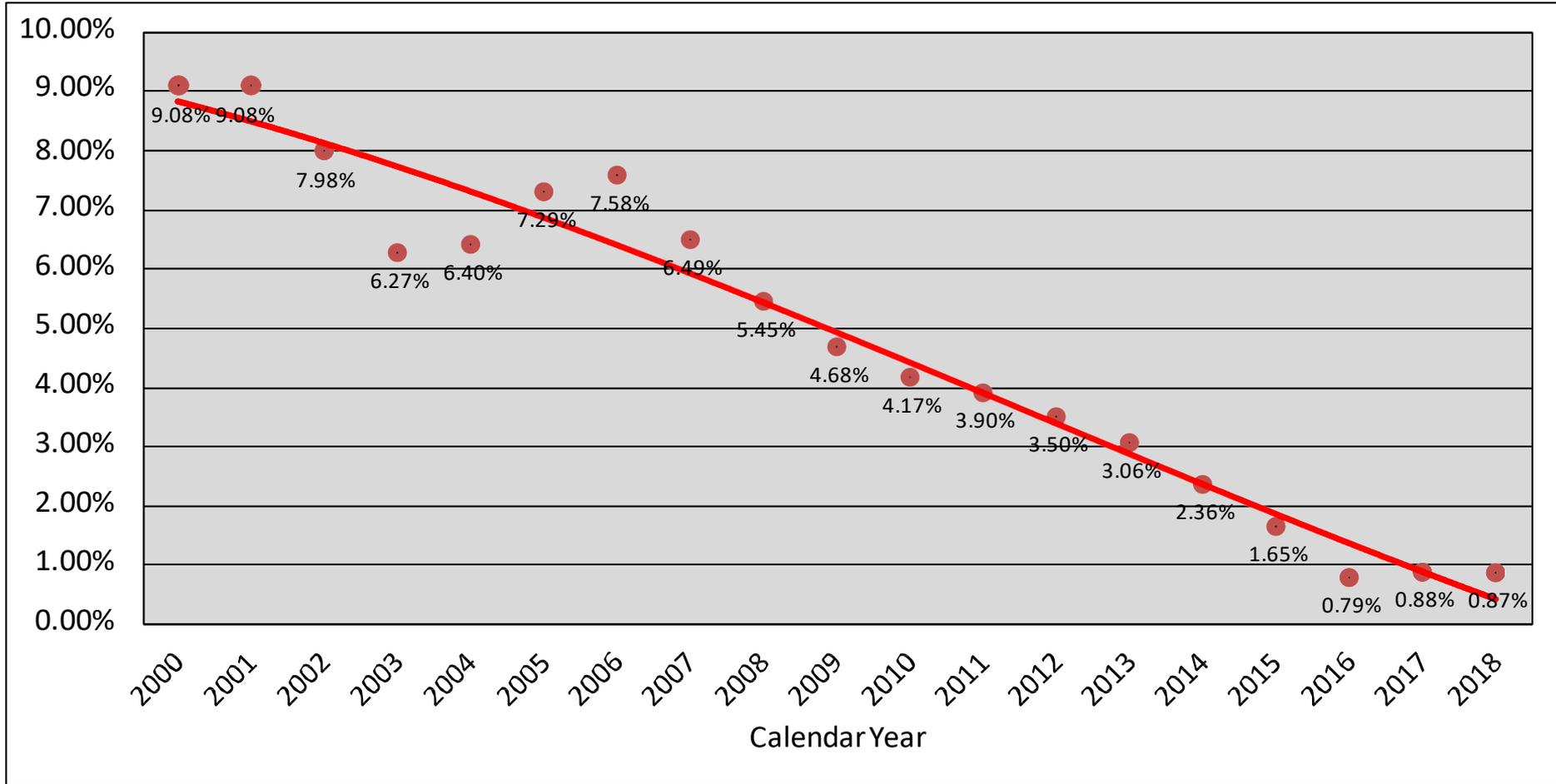
Average DO* Dust Concentration in Underground Coal Mines, by MSHA and Operator Samples



* Designated occupations (DO) exposed to the highest levels of respirable coal mine dust.

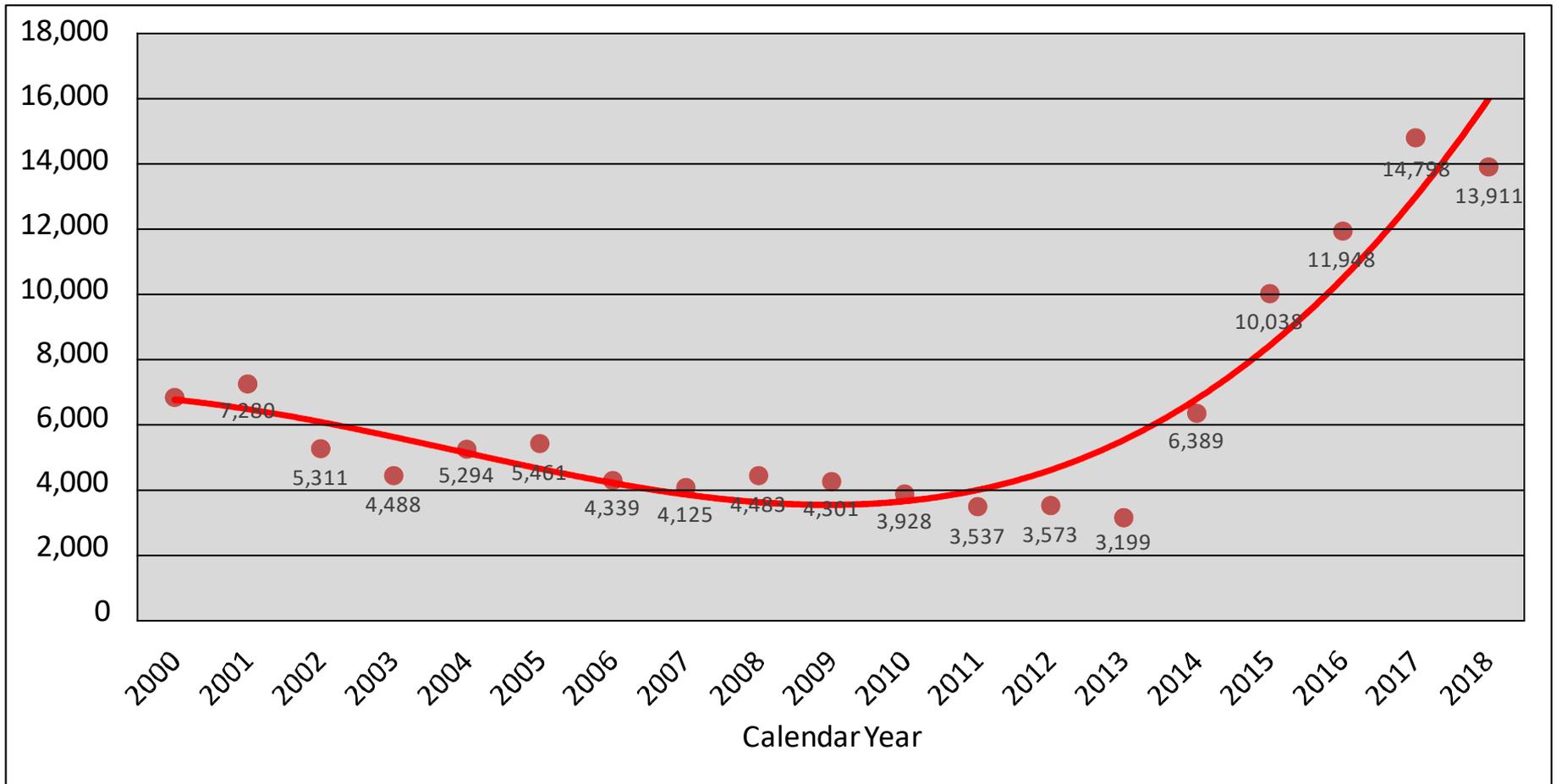
Data as of 1/30/2019

Coal - MSHA & Operator Respirable Dust Samples % > Standard



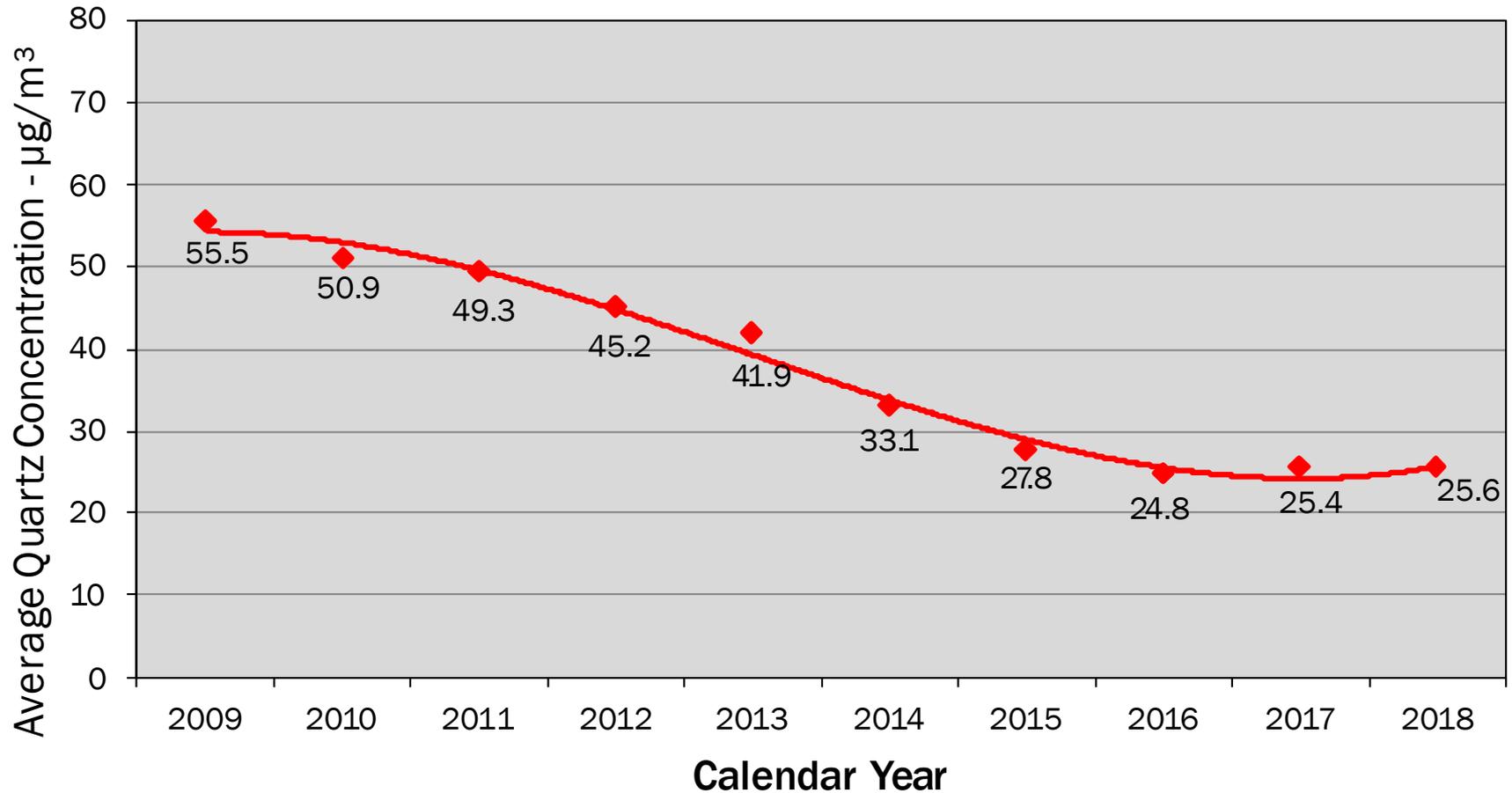
Data as of 1/30/2019

Coal - Number of Valid MSHA Quartz Samples



Data as of 2/5/2019

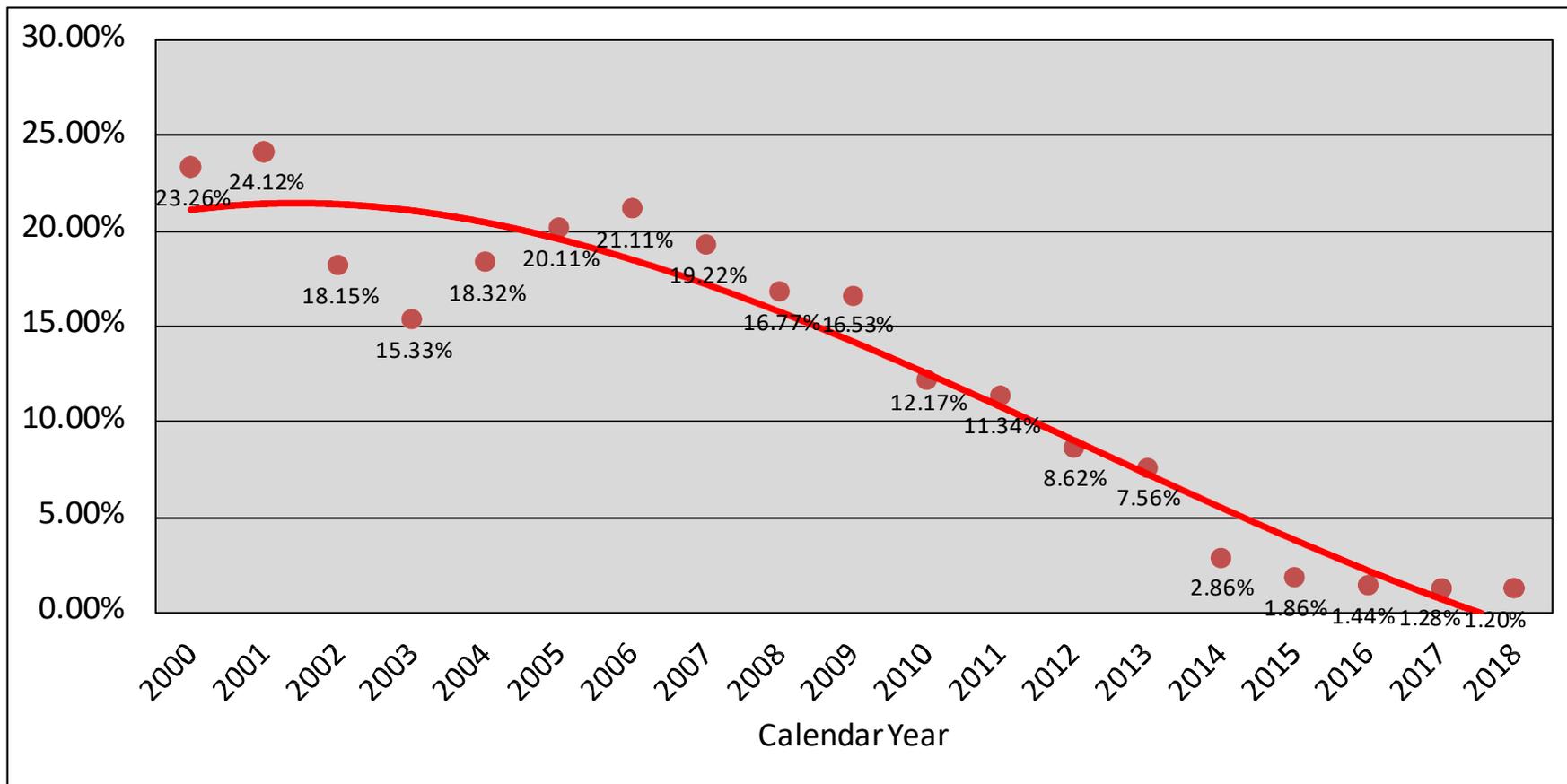
Underground Coal Mines MSHA Average Designated Occupation* Quartz Concentration by Calendar Year



* Designated occupations (DO) exposed to the highest levels of respirable coal mine dust.

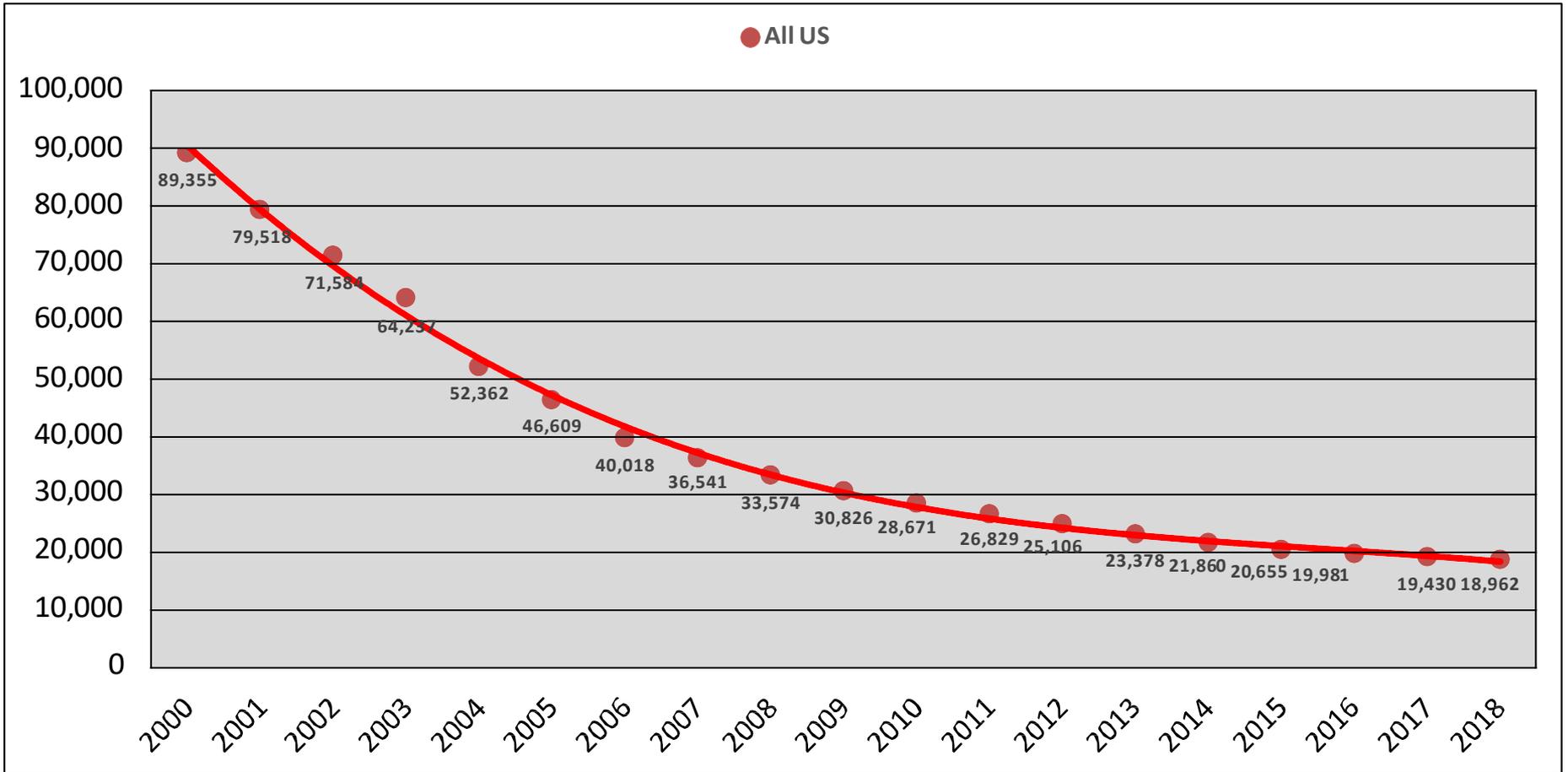
Data as of 1/30/2019

Coal - MSHA Quartz Samples % >100 $\mu\text{g}/\text{m}^3$



Data as of 2/5/2019

Number of Black Lung Claims Paid



Data retrieved from <https://www.dol.gov/owcp/dcmwc/statistics/statistics.htm>

Claims counts are based on number of payments made to miners, widows, or dependents in the state in which the beneficiary resides.



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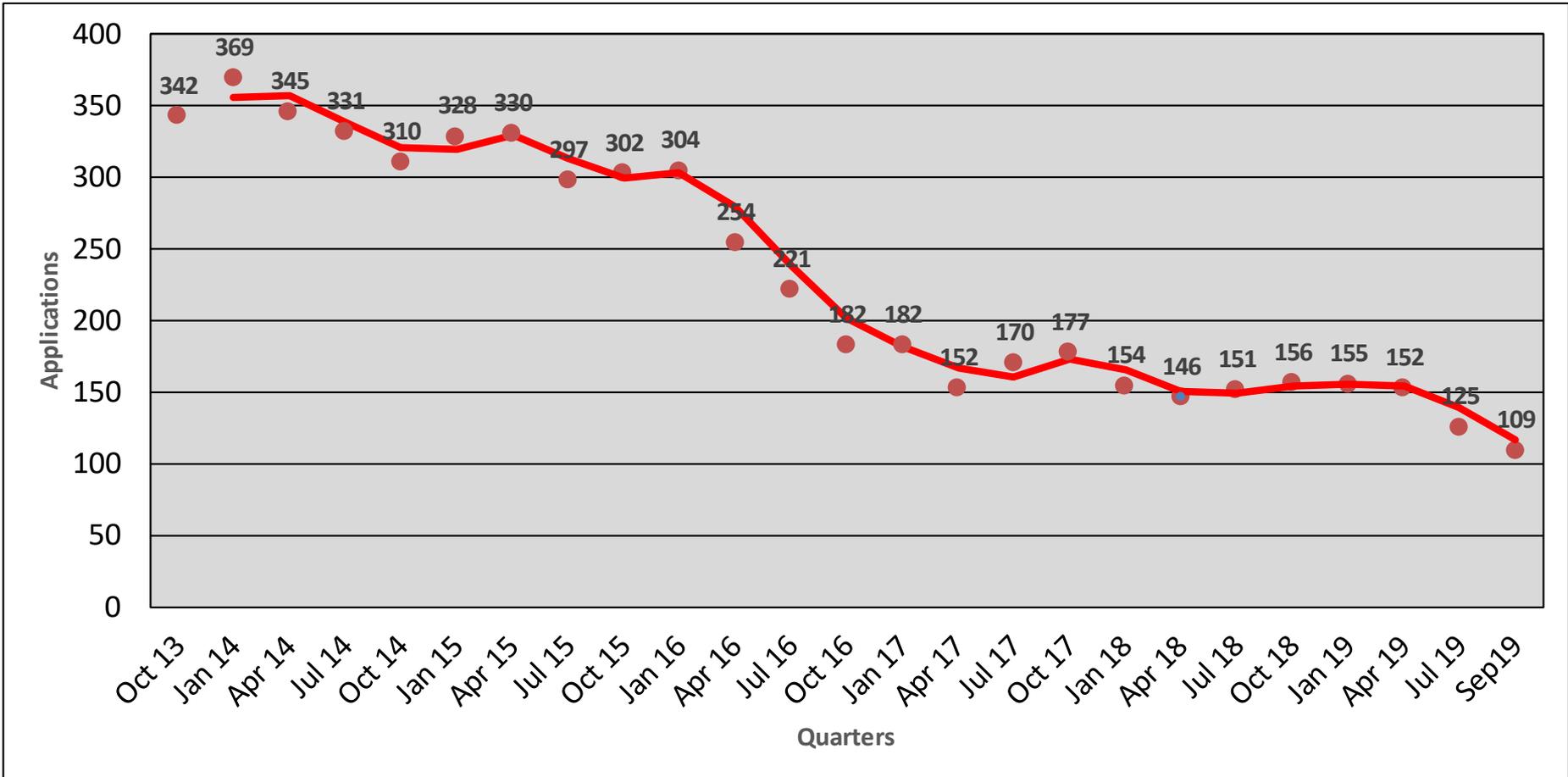
PRODUCT BACKLOG

Technical Support Approval and Certification

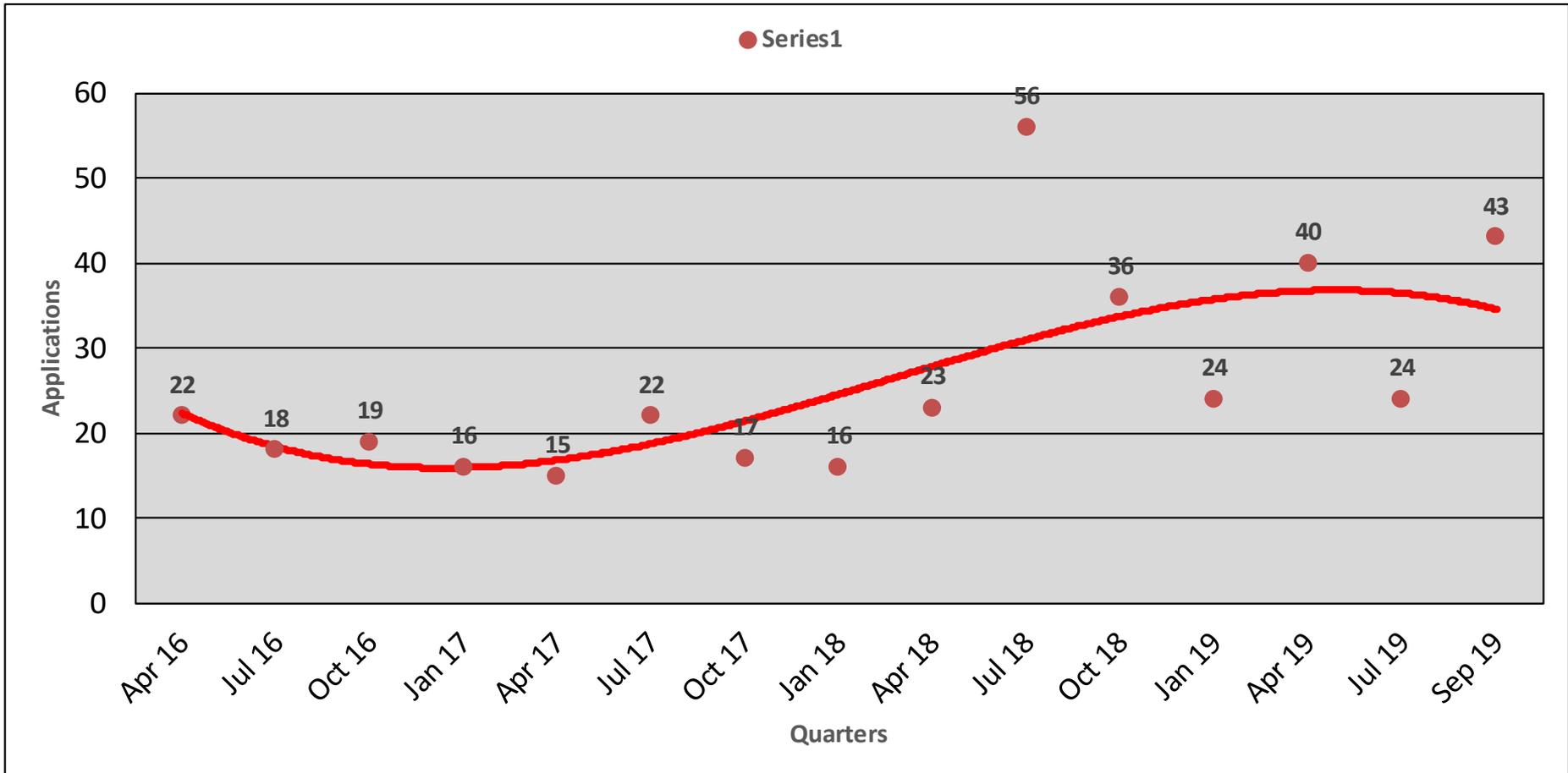
- Electrical Safety Division (pg. 18)
- Quality Assurance and Material Testing Division (pg. 19)
- Mine Waste and Geotechnical Engineering Division (pg. 20)
- Mechanical and Engineering Safety Division (pg. 21)

ELECTRICAL SAFETY DIVISION APPLICATION BACKLOG BY QUARTER

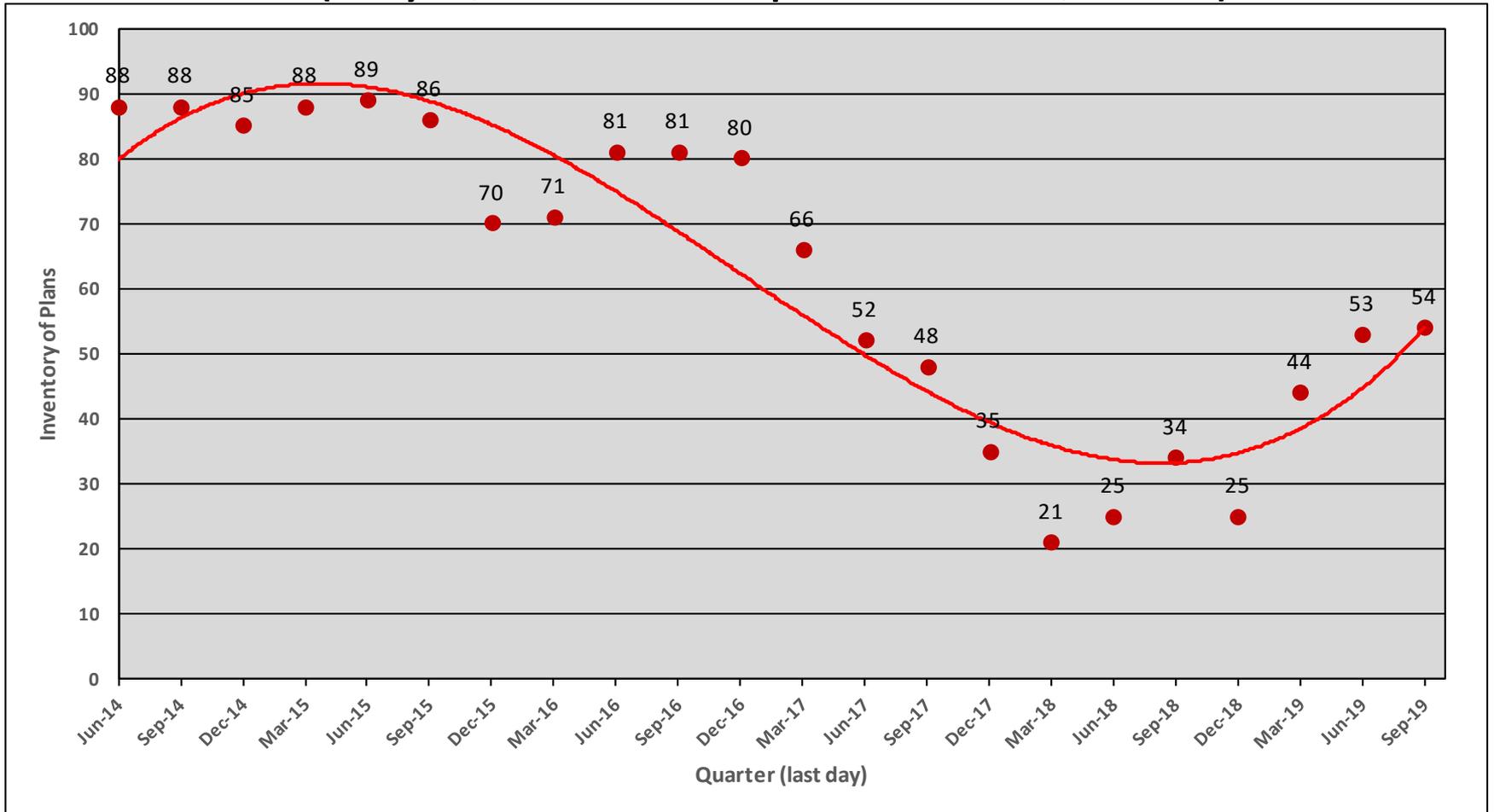
(January 1, 2016 to September 18, 2019)



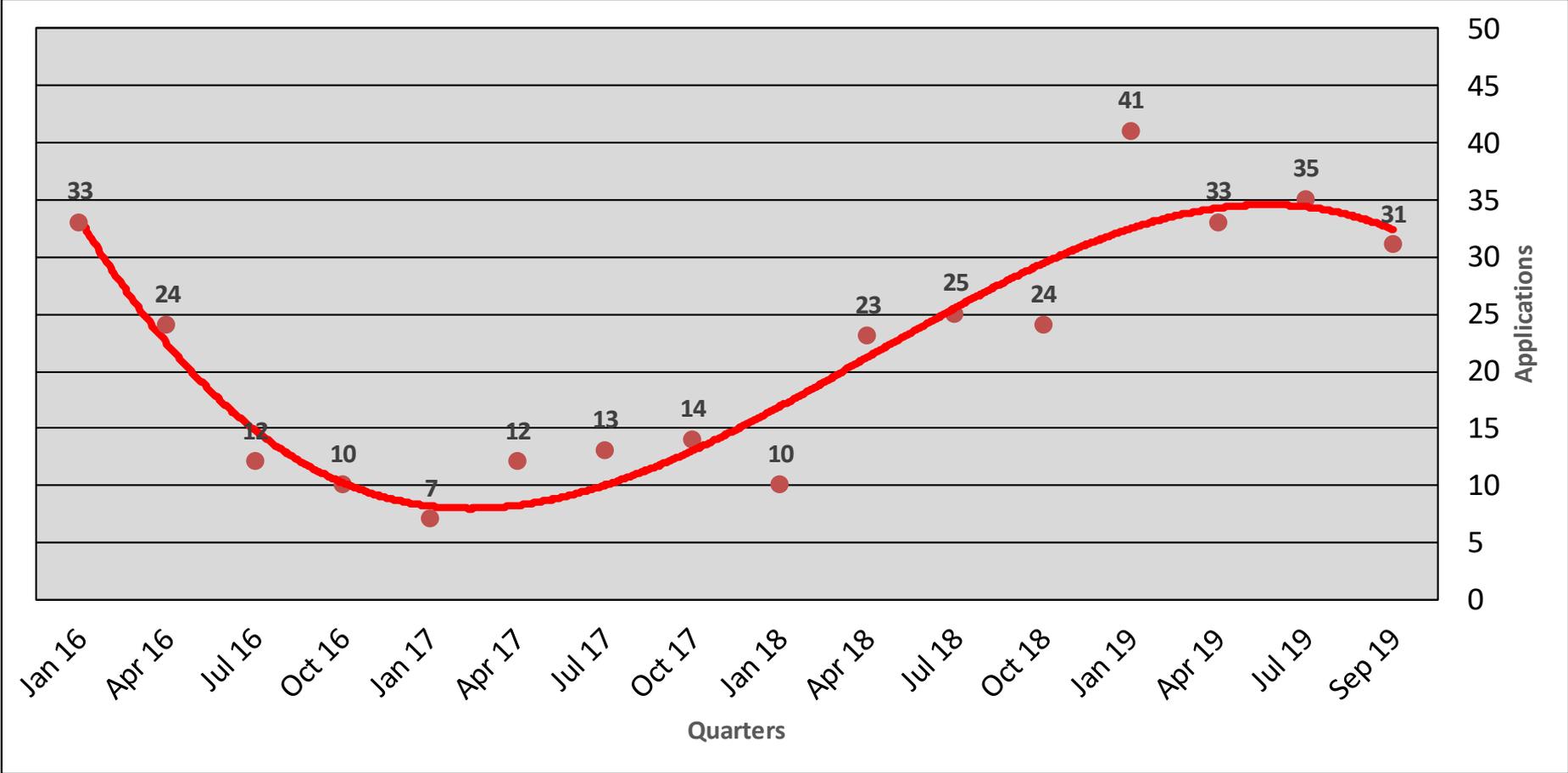
Quality Assurance and Material Testing Division APPLICATION BACKLOG BY QUARTER (January 1, 2016 to September 18, 2019)



Mine Waste and Geotechnical Engineering Division IMPOUNDMENT PLAN BACKLOG BY QUARTER (July 1, 2014 to September 18, 2019)



Mechanical and Electrical Safety Division APPLICATION BACKLOG BY QUARTER (January 1, 2016 to September 18, 2019)





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Powered Haulage Safety Initiative

Powered Haulage accidents were responsible for 50% of fatalities in recent years; 13 of 27 (48%) in 2018

Preventing these accidents is a priority for MSHA, with a focus on:

- Mobile Equipment
- Belt Conveyors
- Seat Belt Safety



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View from the Operator's Cab





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Actual Activity on the Ground

Large vehicles striking other vehicles or pedestrians have killed 24 miners since 2003



Belt Conveyors

- Seven miners killed working around belt conveyors since January 2017; four in coal, three in MNM
- Since 2008, 19 fatalities and more than 40 permanent injuries
- Guarding, lock-out tag-out, properly using crossovers - all essential for safety



Seat Belt Safety

- Three fatalities in 2017 and 2018, and 38 fatalities since 2007, involved miners not wearing seat belts
- 6000+ MSHA citations issued for failure to wear seatbelts since 2007 (most in MNM mines)



Powered Haulage Safety Outreach

We are distributing stickers, brochures and more to spread the word



CONVEYOR SAFETY

Accidents involving conveyor belt systems injure and kill miners every year. Stay safe by following these best practices.

The graphic consists of a dark blue header with the text "CONVEYOR SAFETY" in white and orange. Below the header is a photograph of a conveyor belt system in a mine. At the bottom of the graphic is an orange banner with the text "Accidents involving conveyor belt systems injure and kill miners every year. Stay safe by following these best practices." Below the banner is another photograph of a conveyor belt system in a mine.



ELECTROCUTIONS

- THREE **FATAL** ELECTROCUTIONS IN “SIX” WEEKS
- Two in West Virginia (Coal – District 04)
- One in Louisiana (M/NM – South Central)
- Near miss situations such as “victim in Florida contacted high voltage by placing head in electrical box”

All have somethings in common:

1. “No Lock Out/Tag Out”
2. Not protected with appropriate PPE
3. Working on electrical equipment with Certified or Qualified persons present
4. Working – Not Troubleshooting



Contractors

- Nine of Nineteen Fatalities
- Contractors represent 25% of workforce
- Mine Act defines “operator” to include both owner/production operators and Independent contractors
- Operator & Contractor have equal responsibility for compliance of laws, standards & regulations
- Most (if not all) contractor fatalities show training deficiencies



Fire Suppression Failures

- In 2018, four mobile equipment fires in one month; fire suppression systems failed in all
- One miner killed, another injured
- Fire suppression equipment must be properly installed
- Miners should have a means to escape
- MSHA has inspected mine mobile equipment for effective suppression systems



One MSHA Initiative

- Blurring the distinction between Coal and Metal/Nonmetal enforcement for more efficient use of resources
- Cross training inspectors and updating systems to accommodate change where it makes sense
- Inspector expertise still required for certain mines
- Moved to Phase 2 with an additional 123 mines
- Total to date “blurred” 213 mines





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Scofflaw Initiative

- Small share of operators are chronically delinquent and have poor safety records; worst violators selected each month
- Payment plans proposed/established with total commitment of \$5.8 million
- 35 mines paid in full for \$2.1 million
- 51 104(a) citations issued; 24 104(b) orders issued but none currently active



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In Summary: MSHA Today & Tomorrow

- IT Modernization
- Health Focus
- Workforce for the 21st Century
- Regulatory Review
 - Dust
 - Diesel Emissions
 - Powered Haulage



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Questions?