



MSHA: Diesels in Underground Mining

MDEC
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How does MSHA regulate diesel engines in underground mines?

- ▶ Coal Mines must use MSHA approved diesel engines.
 - 30 CFR PART 7, Subpart E, October 25, 1996
 - Newly Introduced must Meet 30 CFR PART 72.500 Diesel Particulate Matter (DPM) limits, January 19, 2001 (Health Standard)

- ▶ M/NM Mines must use acceptable diesel engines introduced into the mine
 - 30 CFR PART 7, Subpart E
 - 30 CFR PART 36
 - Or Meet or Exceed Diesel Particulate Matter, Table 57.5067-1 July 5, 2001 (Health Standard)



What is an MSHA approved diesel engine?

- ▶ MSHA approves diesel engines for underground mines under 30 CFR Part 7, Subpart E, Category A & B
 - Category A engines are used in gassy areas of the mine
 - Category B engines are used in all other places

- ▶ MSHA Approved Products Part 7 Diesel Engines
 - Support & Resources/Equipment Approval & Certification/Approved Diesel Engines
 - <https://lakegovprod3.msha.gov/ReportView.aspx?ReportCategory=EngineAppNumbers>



DPM Emission Limits for Underground Coal Mines – Part 72.500

- ▶ Permissible Equipment (Used in Gassy Areas of Mine)
 - 2.5 grams/hour

- ▶ Heavy-Duty Equipment (Cuts/Moves Rock/Coal, Drilling or Bolting, Longwall Components, Fuel Transport)
 - 2.5 grams/hour

- ▶ Light-Duty Equipment
 - 5 grams/hour
 - Meet or Exceed Table 72.502-1



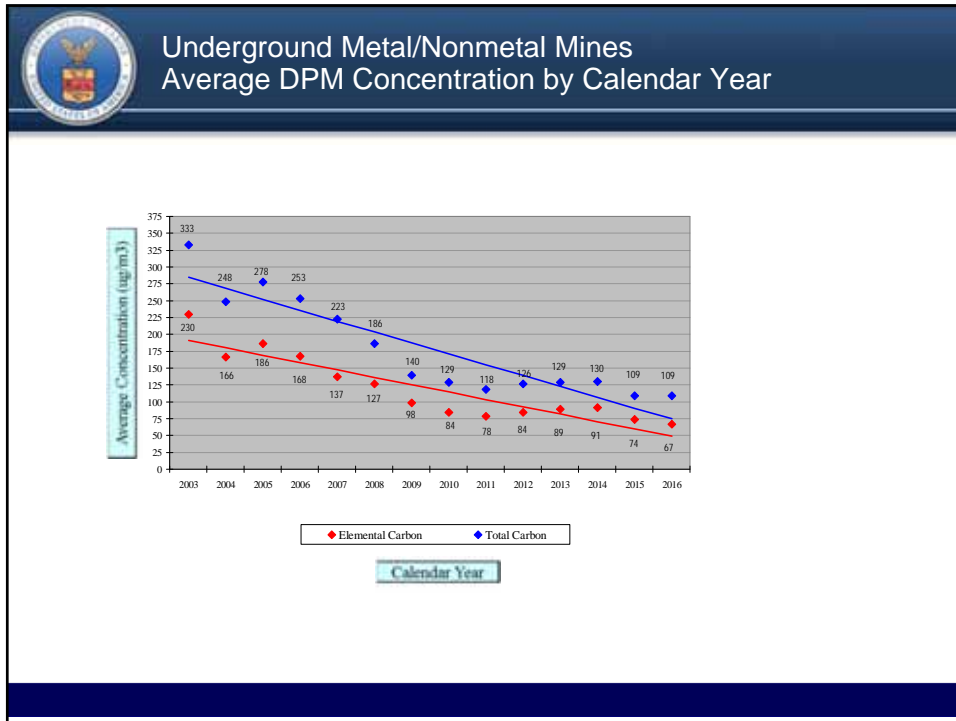
New Technology Diesel Engines

- ▶ Include Exhaust Aftertreatment Devices to Reduce Tailpipe Emissions
 - Diesel Particulate Filter (DPF)
 - Diesel Oxidation Catalyst (DOC)
 - Exhaust Gas Recirculation (EGR)
 - Selective Catalytic Reduction (SCR)
 - Diesel Exhaust Fluid (DEF)



New Technology Diesel Engines

- ▶ New technology diesel engines are available for M/NM Mines to assist in meeting the DPM standards.
- ▶ Coal Mines have some newer technology diesel engines to use in further reducing DPM emissions.



MSHA DPM Samples FY 2012-2016

MSA-M1

	Number of Samples	Samples Exceeding the PEL	Percent
FY 12	1,002	81	8.08%
FY 13	1,018	84	8.25%
FY 14	954	73	7.65%
FY 15	1,053	84	7.98%
FY 16	932	59	6.33%

Slide 8

MSA-M1 Deleted slides 4-6. Combined in one table. Table should be reformatted.

Can we have the samples by calendar year to be consistent with previous slide?

Author, 9/12/2017



MSHA - RFI on Exposure of Underground Miners to Diesel Exhaust

- ▶ The Request for Information (RFI) on Exposure of Underground Miners to Diesel Exhaust was published on June 8, 2016.
 - the comment period has been extended until March 26, 2019
- ▶ MSHA is reviewing the Agency's existing standards and policy guidance on controlling miners' exposures to diesel exhaust to evaluate the effectiveness of the protections now in place to preserve miners' health.
- ▶ NIOSH–MSHA Diesel Exhaust Health Effects Partnership



NIOSH–MSHA Diesel Exhaust Health Effects Partnership

- ▶ The partnership is organized by NIOSH and MSHA.
 - Invited organizations include representatives from labor, industry, trade associations, engine manufacturers, academia, health professionals, and State and Federal organizations.
 - 1st Meeting December 8, 2016
 - 2nd Meeting September 19, 2017
 - Teleconference Meeting June 25, 2018
- ▶ Possible Future Workshops
 - Two possible options: Midwest (Chicago) or Washington, DC
 - January 2019
 - <https://www.msha.gov/regulations/rulemaking/diesel-exhaust-health-effects-partnership>



Thank You

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