2014 Final Dust Rule
Underground Coal Mine Monitoring Program

The final rule makes extensive changes to the existing underground coal mine respirable dust regulations. The major changes are outlined below. You should read the entire final rule to ensure familiarity with all the rule provisions.

Respirable Dust Standard:
The final rule phases in the respirable dust standard; the existing 2.0 mg/m^3 respirable dust standard will be reduced to a level of 1.50 mg/m^3 after 24 months. In addition, the respirable dust standard for intake air is reduced from the existing 1.0 mg/m^3 standard to 0.50 mg/m^3. The respirable dust standard is expressed as a Mining Research Establishment (MRE) equivalent concentration.

Quartz Standard:
The final rule maintains the quartz standard as an MRE equivalent concentration of 100 $\mu g/m^3$ (0.1 mg/m^3). MSHA will reduce the applicable respirable dust standard if an MSHA sample exceeds the 100 $\mu g/m^3$ level, according to the formula of 10 divided by the percent quartz. This calculation will never result in a standard greater than the standard set by the rule. MSHA may cite the operator for exceeding the 100 $\mu g/m^3$ limit if the operator fails to take actions to lower quartz exposures and require corrective actions to reduce the quartz levels present in the working atmosphere. Only MSHA samples will be used in determining quartz levels.

Operator Sampling Program:
Persons certified to perform respirable dust sampling duties will continue to be certified by MSHA. Additional requirements have been included specifying re-certification every 3 years and providing for de-certification of persons failing to perform all sampling duties as required by the rule. Mine operators will continue using the approved coal mine dust personal sampling unit (CMDPSU or gravimetric sampler) until 18 months after the effective date of the final rule.

During the initial 18 month period:

- Sampling conducted with the existing gravimetric sampler will require 5 samples to be collected on consecutive normal production shifts or consecutive normal production days for the Designated Occupation (DO) each bimonthly period.
- Each outby DA will be sampled once each bimonthly period.
- Each sample collected will require the submittal of an additional filter cassette, pre-weighed on the same date as the filter used for sampling, as a control filter.

Eighteen months after the effective date of the rule:

- All samples collected on a mechanized mining unit (MMU) will be collected using an approved Continuous Personal Dust Monitor (CPDM).
- The Designated Occupation (DO) (i.e. continuous miner operator on a continuous miner section) will on a quarterly basis be sampled for 15 consecutive normal production shifts.
- The District Manager may require additional groups of 15 valid samples from the DO when information indicates the operator has not followed the approved ventilation plan for any MMU.
- Other occupations working on the MMU (i.e. shuttle car operator, roof bolter operator) may be designated to be sampled as Other Designated Occupations (ODOs) with a CPDM for 15 consecutive normal production shifts each calendar quarter.
- All outby DAs will be sampled quarterly on 5 consecutive normal production shifts using the current gravimetric sampler or the CPDM.

CPDM Training:
Miners expected to wear a CPDM must be trained on the operation and functional features of the CPDM prior to wearing a CPDM and then every 12 months thereafter.

Noncompliance Determinations:
Noncompliance determinations will be based on a single full-shift sample collected by MSHA, or on Operator collected samples when 2 or more samples in a set of 5 required samples meet or exceed the Excessive Concentration Value (ECV), or if 3 or more samples in a set of 15 required samples meet or exceed the ECV, or the average of all required samples meet or exceed the ECV. The ECVs are calculated to provide a level that indicates with 95% confidence; the applicable standard has been exceeded. Specific ECV tables have been provided for samples collected with the current gravimetric sampler and for the CPDM unit.

Actions to Terminate an Excessive Dust Citation:
Upon receipt of a citation for excessive dust, the operator must 1) make respirators available, 2) immediately take corrective actions to lower the respirable dust levels, 3) upon implementation of the corrective action make a record of the action taken in a secure book, and 4) within 8 days of the citation date begin sampling consecutive normal production shifts until 5 valid samples are collected. MSHA will terminate the citation if the equivalent concentration of each of the 5 samples collected is less than or equal to the applicable standard and the operator has submitted a revised ventilation plan incorporating the corrective actions, and the District Manager approves the revised plan.

Corrective Action Required:
When any sample meets or exceeds the ECV, the operator must take action to prevent future excessive exposure.
The operator must make respirators available and immediately take corrective action to reduce the concentration of respirable dust to at or below the applicable respirable dust standard and record the corrective actions in a secure book. MSHA will review these records when determining if a mine's ventilation plan is adequate.
If only 1 of 5 required samples or no more than 2 of 15 required samples meet or exceed the ECV, the operator is not cited for exceeding the applicable respirable dust standard.

Sample and Data Transmission:
If using the current gravimetric sampler, samples must be transmitted to MSHA within 24 hours of the end of the sampled shift. The accompanying dust data card must be completed and signed by the certified sampler that performed the sample checks during the sampling shift underground.
If using the CPDM, the person certified in sampling shall validate, certify and transmit electronically to MSHA within 24 hours after the end of each sampling shift all sample data file information collected and stored in the CPDM. The operator must maintain a copy of the CPDM files for at least 12 months.

Status Changes:
The mine operator must report to MSHA in writing or electronically a change in operational status of the mine or a sampling entity within 3 working days.

Posting of Sample Data:
For existing gravimetric samples (CMDPSU), the operator must post, on the mine bulletin board, the MSHA provided report for at least 31 days.

For CPDM data, the person certified in sampling shall, within 12 hours after the end of each sampling shift, print, sign and post on the mine bulletin board the CPDM generated dust data card. The CPDM generated dust data card shall remain posted until receipt of the MSHA respirable dust sampling report. The MSHA provided report shall be posted on the mine bulletin board for at least 31 days.