

**Safety And Health Regulations  
For Mineral Mining**  
**2009 Changes**

**DMME**

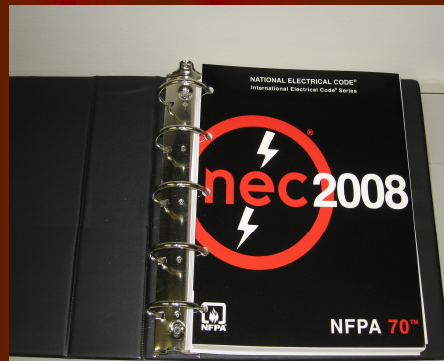
**Division of Mineral Mining**

**AR 2012**

# Referenced Documents

## 4VAC25-40-90

- Other agency/organization regulations, guidelines, etc., incorporated by reference For example: National Electrical Code.



- 2009 change: Document dates updated. For example, 2008 edition of the NEC.

# Duties of Certified Foreman

## 4 VAC 25-40-120/130

- Ensure all activities under their supervision are conducted in a safe manner. Conditions and work practices must comply with State mining laws and regulations.
- Conduct examination of work environments (active workings) at the beginning of the shift, PRIOR to miners starting work; hazards or unsafe conditions must be corrected prior to personnel starting work in the affected area, or the area must be barricaded and posted with warning signs.
- 2009 change (new wording in quotes): The record of the examination made must include; “date, areas examined, time work began in the area and time of examination. Hazards found and corrective actions taken must be documented. The examination must be signed” and kept for one year. The term, *pre-shift examination*, is no longer used.

# Miners Must Comply With Regs

## 4 VAC 25-40-190

- Once properly trained in DMM safety regulations, all miners must comply with regulations that apply to their task or duties.
- 2009 change: “Mine employees” is replaced with “Miners”.



*Miner ensuring guards are in place prior to starting equipment.*

# Repairing Machinery

## 4VAC25-40-350

- Repairs or maintenance shall not be performed on machinery until the power is off and the machinery is blocked against motion, except where motion is necessary to make adjustments.
- 2009 change: The regulation goes on to require energy sources, other than electricity or internal combustion, be tagged out. The regulations covering electricity (4VAC25-40-2140/2150) and internal combustion (4VAC25-40-1685) are now referenced so there is no confusion. The tags now must be, “marked by a means that identifies”, the individuals doing the work. Previously, they had to be “signed”.

# Construction and Maintenance of Structures

4VAC25-40-365

- New regulation in 2009:
  - “Structures shall be of substantial construction and maintained in safe condition”.



# Engineering Controls vs. PPE

4VAC25-40-720/770

- Engineering and administrative controls will be used first and foremost to protect miners from harmful levels of noise and contaminants.
- 2009 changes: An approved program to “limit miner’s exposure to airborne contaminants” must be implemented by the operator if the controls above are not available. Respiratory equipment must be “acceptable” and “appropriate for the hazard”.
- Acceptable personal protective equipment shall be available. Hearing protection must be available upon request.

# Storage Of Explosives

## 4VAC25-40-780

- 2009 changes:
  - 780.C.3. Magazines must be of “substantial construction and constructed of noncombustible material” or covered with fire-resistant material.
  - 780.E. The ATF is now the ATF&E (Alcohol, Tobacco, Firearms and Explosives) and is now under the Department of Justice.



# Use Of Explosives

## 4VAC25-40-800

- 2009 changes:
  - 800.D. “Flyrock incidents shall be reported to DMM immediately and details noted in the blast record”, added at end.
  - 800.G. “the certified blaster in charge shall”, carry out items 1 thru 4 (monitor weather, inspect blast site, inspect boreholes and clear site of people and equipment).
  - 800.H. (totally new wording) The certified blaster in charge shall review the drill logs to determine specific down-hole conditions prior to loading the shot.
  - 800.I thru 800.U. Because of the all new wording of 800.H above, the old wording of “H” thru “T” is now “I” thru “U”.
  - 800.Q. (formerly 800.P.) Areas containing loaded boreholes shall be guarded or barricaded “and posted” to prevent unauthorized entry.
  - 800.U. (formerly 800.T.) The all clear signal must be given by the certified blaster “in charge”.

# Recordkeeping

## 4VAC25-40-810

- A detailed record of each blast shall be prepared immediately by the certified blaster.
- 2009 changes:
  - 810.3. Name, signature and certification number of “the certified” blaster in charge.
  - 810.5. Number of holes “and” burden and spacing “for each hole”.
  - 810.6 All new wording, “Drill logs of boreholes as required by 4VAC25-40-1095.”
  - 810.15 Type of detonators used and “timing of detonation for each detonator used.”
  - 810.19. New sub-section, “All anomalies or abnormalities occurring during the execution of the blast and actions taken to correct or address them.”

# Ground Vibration Limits

## 4 VAC 25-40-880

### 2009 changes:

- 880.A. The Ds (scaled distance) factors are removed from the table.
- 880.B. New wording to require seismograph use in most cases, “Seismic monitoring of each blast shall be conducted, unless the scaled distance, Ds, (using the formula provided) is 90 or greater”. “Ds =”, explanation removed since the factors are no longer given. Scaled distance must be calculated per the formula shown.



# Air Overpressure Limits

4VAC25-40-890



## 2009 changes:

- Title of this regulation changed from, *Airblast limits*.
- Acceptance of multiple types of equipment and peak readings has been removed, “Air overpressure resulting from surface blasting shall not exceed 133 decibels as measured with a 2 Hz or lower flat response microphone at any inhabited building not owned or leased by the operator.”

# Action Plans

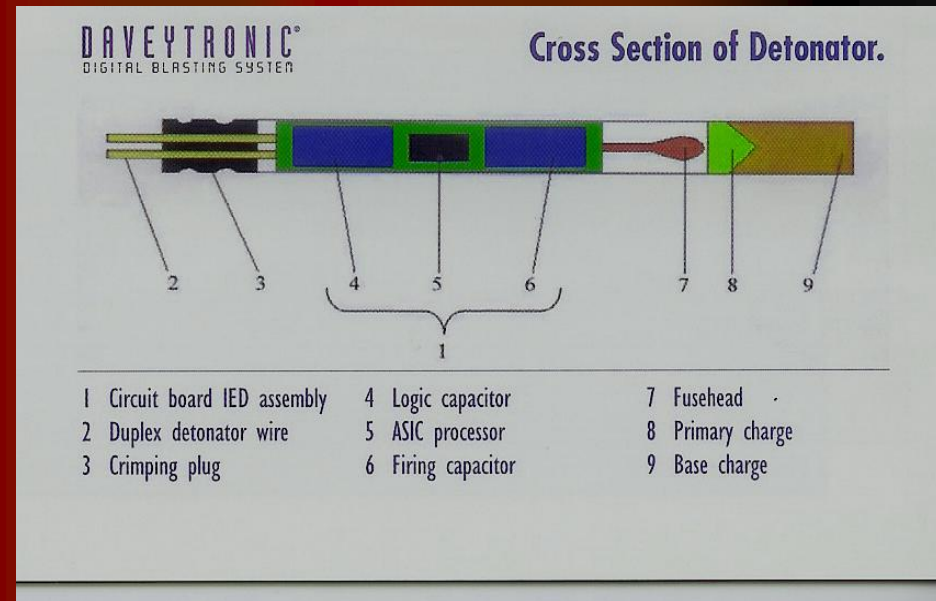
## 4VAC25-40-893

- New regulation in 2009:
  - “ Each operator shall maintain a plan to control the effects of blasting on areas adjacent to the operation. This plan will be documented and made available for review by the Division of Mineral Mining upon request”.
- This regulation attempts to address the rising number of complaints from property owners surrounding mine sites.

# Electronic Detonators

## 4VAC25-40-925

- New regulation in 2009:
  - “Electronic detonation systems shall be approved by the Director as providing performance equivalent to that required in 4VAC25-40-920 (electric detonators), and shall be used in accordance with the manufacturer’s instructions”.



# Drill Logs Required

## 4VAC25-40-1095

- New regulation in 2009:
  - “For each borehole intended for blasting, the driller shall produce a drill log as each hole is being drilled. The drill log shall include, at minimum, the name of the driller, borehole diameter, borehole depth, depth of broken material at the collar, and other geological conditions (for example, cracks, seams, voids, mud, or other anomalies that could affect the blast) encountered during drilling. A signed copy of the drill log shall be provided to the mine operator and a copy shall be included in the record of the blast.”

# Avoiding Mobile Equipment In Operation

4VAC25-40-1600

- 2009 changes:
  - Loaders, removed from regulation title. “Mobile Equipment”, added.
  - Language added and changed to remove all reference to loaders and broaden to include all mobile equipment: “Persons shall remain clear of mobile equipment in operation and shall not work or pass under the buckets or booms of equipment in operation.”