

Each month DMME personnel will be conducting monthly safety talks pertaining to Emergency Response and Preparedness. Topic-of-the-Month brochures and safety stickers will be handed out during these talks to help remind you of these critical safety points.



The Virginia Department of Mines, Minerals and Energy has developed several award winning mine safety videos. These videos were made possible thru Grants from the Mine Safety and Health Administration and can be found on our website at:
www.dmme.virginia.gov

Mine Safety Videos:

- ◆ The Right Choice
- ◆ Step Up To The Plate
- ◆ Lead The Way
- ◆ No Way Out
- ◆ The Miners' Bond



Additional Information

For more information on the Virginia Topic-of-the-Month Mine Emergency Campaign, please contact:

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UNDERGROUND

MINE VENTILATION



Virginia Department of
Mines, Minerals and Energy



Mine Emergency

**April 2017
Topic-of-the-Month**

MINE SPECIFIC INFORMATION

Violations/Orders:

- Pre-shift, On-shift, Weekly Examinations (45.1-161.208-210)
- Mine fans, Auxiliary fans (45.1-161.211 & 216-218)
- Volume of air, Bleeder systems, Coursing of air (45.1-161.219-221)

MINE VENTILATION

Mine ventilation is necessary for the preservation of human life and for the work to extract coal from underground mines. It is easily the most important function pertaining to the mining of coal.

One of them most important function of any examiner conducting pre-shift, on-shift, or weekly examinations is to determine if the air is traveling in its regular course and in sufficient volume in each split. Examiners must also take air readings at each required location detailed in mining laws and regulations.

All mines must also have a bleeder system, approved by the Chief, which provides positive movement of air through or around worked-out areas which is sufficient to prevent a hazardous accumulation of gas in the bleeder system.



SAFETY TIPS

- Mine ignitions and explosions are often the result of an interruption in the ventilation system. Always shut doors you may travel through, re-hang curtains you may knock down, and immediately repair any other damage to ventilation controls.
- Air always flows from a point of higher pressure to a point of lower pressure.
- Blowing fans create a high pressure point immediately inby the fan. Air will travel from this high pressure point through the mine to the surface.
- Exhausting fans create a low pressure point immediately inby the fan. Air will travel from the surface through the mine to this low pressure point.
- Stopping or brattices separate the different splits of air in the mine. Stopping should always be maintained up to and including the third connecting cross outby the face unless approved otherwise.
- Always keep one door of a set of air lock doors closed at all times. Opening both doors can result in an interruption in the ventilation system.

SAFETY TIPS—continued

- Changes in the mine ventilation system should be made when the mine is not in operation and there are no miners in mine other than those engaged in making the ventilation change.
- The air current at working faces shall, under all conditions, have a sufficient volume and velocity to readily dilute and carry away any flammable or harmful gasses or dust. (45.1-161-219.B)
- Regulators control the amount of air flow to different splits of air. Making major adjustments to regulators can result in a ventilation change and should always be made when the mine is idle.
- Overcasts are air bridges, allowing intake and return air to cross without mixing. Overcasts typically have large pressure differentials between the air splits and are a prime contributor to leakage. Overcasts with high leakage should be repaired as soon as practical.



MINE EMERGENCY SAFETY CHECK

T	F	Changes in the ventilation system may be made at any time?
T	F	Large air leakages are never found at overcasts?
T	F	The mine examiner must determine if air is flowing in its proper course and is of sufficient volume?
T	F	Stoppings should always be maintained up to and including the third open crosscut outby the face?
T	F	All mines must have a bleeder system which provides positive movement throughout the worked out areas of the mine?
T	F	You may knock out a stopping at any time to take equipment through?
T	F	Both doors of an air lock can be opened at the same time ?
T	F	Blowing fans create a low pressure point just inby the fan ?
T	F	Regulators can be adjusted at any time ?
T	F	The air current in working places must be of sufficient volume to carry away all dust from mining?