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

DMME
Virginia Department of Mines Minerals and Energy

Additional Information

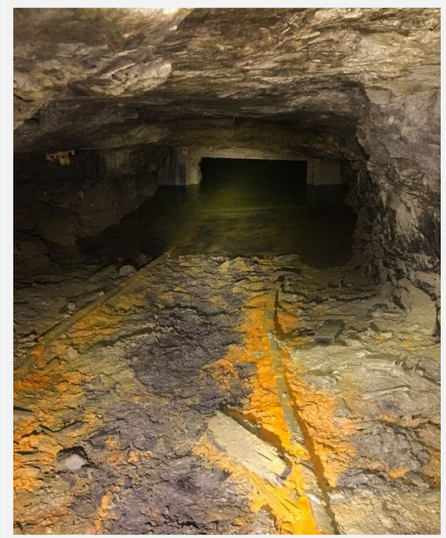
For more information on the Virginia Topic-of-the-Month Mine Emergency Campaign, please contact:

Division of Mines
P.O. Drawer 900
Big Stone Gap, VA 24219
(276) 523-8224

UNDERGROUND

ABANDONED WORKINGS

Virginia Department of Mines, Minerals and Energy



Mine Emergency

June 2017
Topic-of-the-Month

POTENTIALLY DANGEROUS AREAS

- Abandoned workings
- Gob/Pillared Areas;
- Old Mines—over, under and adjacent mines
- Sealed Areas
- Areas in active mines not adequately ventilated.

The three most dangerous situations are:

1. 5% - 15% methane and at least 12.1% oxygen (sufficient to cause an ignition or explosion);
2. Inundation of methane—a high concentration (60%, 70%, 80%, etc.) that decreases oxygen to an irrespirable level;
3. Inundation of blackdamp—atmosphere deficient of oxygen that may not support life (main constituent in blackdamp that is deadly is carbon dioxide—CO2)

All three types of these incidents have occurred in VA coal mines, resulting in loss of life.

These potentially dangerous areas present deadly hazards to miners including, explosions, fires and inundations of water, methane, blackdamp, etc.

KEY POINTS

KEYPOINTS

⇒ Areas in active mines not adequately ventilated have inherent dangers due to methane accumulations, roof falls, bad roof/ribs or water.

⇒ In old or abandoned mines with no ventilation, water accumulations may displace methane and low oxygen (blackdamp) . If the active mine cuts or cracks into this mine, these gases will inundate the mine very quickly.

⇒ Pressurized gases that enter an active mine may neutralize the ventilation system and contaminate the intake escapeway causing one of the most dangerous types of mine emergencies.

⇒ If water and blackdamp are flowing into an active mine together, then the blackdamp will be on tops of the water and will flow to lower elevations, just like water.

⇒ Bleeder/ventilation plans are designed to carry away and clear mine gases around gob/pillared areas to a level within the limits allowed by DM and MSHA.

⇒ New laws requiring 120 PSI seals have reduced the potential of seals blowing out into active areas and or destroying integrity of the seals.

KEYPOINTS—continued

⇒ In Virginia, active mines have cracked or cut into abandoned mines that resulted in inundations of water, methane or low oxygen (blackdamp).

⇒ VA 2015 Active Mine Event—Facts

- Inadequate ventilation around/through gob/pillared area;
- Methane gas accumulated;
- Roof fall or some other event ignited the gas;
- Ignition forces passed by some miners and traveled outby for several hundred feet.
- Blew out 50+ stoppings, outby the section.

SAFETY TIPS

◊ Conduct quality, thorough examinations looking for any changes especially cracks in the floor, roof or ribs.

◊ Familiarize yourself with all the mine maps. Be cautious of old mines located above, below and adjacent to your mine.

SAFETY TIPS

◊ Be aware of signs of mining near old mines, old works, etc. (changes in coal appearance/cutting characteristics, etc.), cracks in mine floor, roof, ribs and water coming in.

◊ Take all quarterly drills very serious, it could save you life.

MINE EMERGENCY SAFETY CHECK

T	F	Areas in active mines not adequately ventilated do not have inherent dangers?
T	F	Blackdamp is located on top of water and will flow to lower elevations?
T	F	Inadequately ventilated areas in active mines are potentially dangerous areas?
T	F	Bleeder/ventilation plans are only used to satisfy State and Federal agencies?
T	F	Information taught in a quarterly drill could save your life?
T	F	Signs of mining near old works include changes in the coals appearance?
T	F	Mine maps will show where old mines are located?