2019
MINE RESCUE DAY 2

KENTUCKY RIVER
MINE RESCUE, PRESHIFT, BENCH
AND FIRST AID CONTEST
Day 2 Statement

Hello, thank you for responding to our call for help at the Hazard-US No. 1 mine. Earlier this shift, a miner working on the section called outside to report that the continuous miner had cut into a pocket of black damp. The mine foreman tried to reach the face, but had to turn back due to high methane and low oxygen. This section recently punched into a previously mined panel to establish a bleeder system. Four miners are still missing. This mine has a history of methane liberation, water, and bad roof. This mine is ventilated by an exhausting fan located in the #3 entry, just outby the fresh air base. The fan is currently off but can be started if necessary. Another mine rescue team arrived at our other portal and explored the inby panel. They were able to establish a clear airway that can be ventilated through. Underground power has been knocked and locked out by our chief electrician. A water pump with 250 feet of power cable is ready for use and located at the FAB. To use the pump, the team must ask the superintendent to turn the pump on or off by using the pump switch at the briefing officer’s station.

A back up team and competent lifeline judge are ready to assist you at the fresh air base. Be safe and good luck!
Day 2 Written Instructions

The exhausting fan cannot be reversed.
The fan can be stopped and started as needed.
Do not stall the fan.
The team can only carry 2 timbers per team member. When moving, team members must carry their own timbers.
Brattices and line curtains must be carried by team members, not transported by the stretcher.
The area inby the cut through has been explored and is safe to ventilate through.
Locate the four missing miners and bring all survivors to the fresh air base.
Explore all areas of the mine that can be done safely and finish the problem within the 60 minute time limit.
Day 2 Judges Briefing

**Fresh Air Base:** The team must check up to the stoppings in the #1, #2 and #3 entries. GT & DI are required at the stoppings in #2. A GT, RR, and DI are required at the caved airtight in the #2 entry. The team may advance into the mine by air locking in the #1 entry or #3 entry. To do this, they have to use the stopping in the #2 entry outby the FAB.

**Team Stop 1:** GT, DI, RR at unsafe roof in #1. GT in crosscut, DI at the partially destroyed permanent stopping. The patient inby unsafe roof will read statement, “help, I can’t move!” when team makes this stop which will verbally tie the team to the patient.

**Team Stop 2:** GT, DI, RR at unsafe roof inby #2. Then GT, DI, RR at the back side of the caved airtight. GT in the left crosscut and DI at the partially destroyed permanent stopping. No RR is required at the loose rib in 2 Left crosscut.

**Team Stop 3:** GT & DI at the water over knee deep. GT and DI at the backside of the stopping outby in #3 entry to tie in.

**Vent 1:** The team cannot go any farther than team stop #3 at this time because of unsafe roof and water over knee deep. They must clear the gasses in the first crosscut so they can use the pump to remove the water in #3 entry. To complete this vent, the team must build stoppings in #1, #2, and #3 entries inby the FAB. Before turning the fan on, the team must move the battery mine phone.
**Pump 1:** The team will take the pump up the #3 entry and place at the water over knee deep. They will then request permission from the superintendent to turn the pump on.

**Team Stop 4:** GT, DI at barricade – no response. GT in left crosscut.

**Team Stop 5:** The outby door of overcast will be open and inby door will be closed. Team will step through door GT, DI, RR at back side of unsafe rood in #2 entry, they must also DI the wall of the overcast on the outby side. GT in crosscut, GT & DI at RA door, enter RA, purge valve, then enter RA. There are no patients/bodies in the RA, so the team will exit and continue exploring.

**Team Stop 6:** GT, DI, RR at caved. GT inby.

**Team Stop 7:** Zigzag RR in intersection, DI at unsafe roof in intersection. GT in crosscut.

**Team Stop 8:** GT, DI location of the body and check lunch bucket. GT and DI at wall of overcast. GT & DI at barricade. No response at barricade. Team must now use timbers to get patient in #1 entry before advancing to the next team stop.

**Recover Patient:** The team must set 4 timbers in the unsafe roof, touch and assess the patient, do a GT, DI, and RR at back side of both the unsafe and the caved, then take patient to FAB.

**Team Stop 9:** GT, DI, RR at face. GT in both CC. Team must follow contaminant to team stop 10.
Team Stop 10: GT, DI, RR at diagonal unsafe. They will then travel into heading, touch and DI body. GT, DI, RR at face. The team may or may use the timbers to travel through the unsafe roof now or before vent 2.

Team Stop 11: GT, DI at stopping. GT, DI, RR at caved.

Vent 2: Team must set 3 timbers around the corner at the triangular unsafe roof at team stop 7 or timber through the elongated unsafe roof from the other side. GT after they explore past the unsafe roof. RR and DI at the backside of the intersection. RR and DI at the diagonal unsafe roof. This area is now considered explored for ventilation purposes. The team must open the inby door of overcast and build a stopping in #2 to keep air from moving over the battery ram car. They must then build in the #1 entry outby diagonal unsafe roof, left of overcast, #2 entry just outby overcast, and between 1&2 in 2\textsuperscript{nd} crosscut. After turning fan on, the team must wing a line curtain out in front of the barricade to remove the gas in front of it.

Breach Barricade. Team will airlock into barricade.

Team Stop 12: GT after breaching barricade. GT & DI at backside of outby barricade. GT, touch, assess, and DI patient, GT, DI, RR at caved.

Bring patient to FAB

Stop Clock
Patient Statement in #1 Entry
“Help, I can’t move!”
Water pump with 250' of power cable and discharge line

Exhausting fan off
2019 Kentucky River Mine Rescue Contest

Day 2

Working Number: ____________________________  Contestant Name: ____________________________

1. One and one-half to _______ percent methane together with coal dust in air may be explosive. (5)
   a) Five
   b) Two
   c) Three

2. If the fresh air base is underground, it should be located where it's _______ a fresh air travelway to the surface. (63)
   a) Assured
   b) Permitted
   c) Given

3. Monitoring _________ and gases helps determine the effectiveness of firefighting and the potential danger of an explosion. (50)
   a) Pressures
   b) Levels
   c) Temperatures

4. Rescue teams are responsible for assessing damage to the _______ system. (20)
   a) Communication
   b) Electrical
   c) Ventilation

5. Ventilation controls are used underground to properly _______ air to all sections of the mine. (58)
   a) Disburse
   b) Dilute
c) Distribute

6. Mine rescue teams may find it necessary to use line brattice to sweep noxious or explosive gases from a _____ area. (18)
   a) Caved
   b) Face
   c) Sealed

7. Team captains should _____ roof and ribs before the team members advance into the area. (70)
   a) Inspect
   b) Test
   c) Sound

8. When survivors are _______, they should be transported to safety and fresh air as quickly as possible. (79)
   a) Found
   b) Located
   c) Conscious

9. After a fire has been sealed, it is recommended to wait _____ hours before making the initial visit to the seals. (96)
   a) 24
   b) 72
   c) 48

10. Firefighters force inert gases into areas where they are trying to remove the oxygen _____ of the fire triangle. (99)
    a) Side
    b) Content
    c) Leg
Answer Key

1. B
2. A
3. A
4. C
5. C
6. B
7. A
8. B
9. B
10. C