

# 2012 Maysville Mine Rescue Contest

## Team Exploration Solution

### First Exploration:

Teams will examine all openings, conduct gas tests (GT), the captain will date & initial (D&I) the temporary stoppings across the three headings. *These checks must be made to assure the conditions are safe to proceed. Dock the team if the D&I's and GT's are not made.* The team will travel in by the fresh air base in the entry of their choice. This solution assumes that the teams will begin their exploration in the #3 entry. (Intake air) *The team must count off before entering or leaving the mine. If team does not "count off" dock them under Surface Judge #1, Item 10.*

### Team Stop #1

The team will build an airlock in #3 Heading. The 50' apparatus check (AP) must be conducted at team stop #1 beyond the temporary stopping installed by the previous team. The team will breach temporary stopping and take a gas test, check ground conditions, D&I, etc.

*If the team does not build an airlock, dock them under Underground Judge #2, Item 10 (for failure to erect temporary stopping when necessary) and Underground Judge #2, Item 12, (for changing ventilation before the effects of such changes are known).*

*If team does not make a 50' apparatus check, dock them under Underground Judge #1, Item 3 (dock the team if their check is done between the temporary stopping and their stopping inside the airlock).*

The team encounters smoke in entries 1, 2, and 3 at crosscut #A and #B. Smoke is the entire problem until cleared. *If team does not stay connected to the life line dock them under Underground Judge #2, Item 9. If captain does not check the team members when entering smoke, dock them under Underground Judge #1, Item 12.*

Captain will take the necessary exploration gas test as shown on the map. Captain will find the Gas Testing Station and will have to "hood" the detector and put the gas on the detector. The captain will

give the readings from the detector to the head judge who will write the readings down on the judge's map.

*If team does not make the "hooded" gas check on the detector, dock them under Underground Judge #2, Item 4 for each incorrect reading. 15 docks X 4 = 60 docks*

**Team Stop #2** (Team must remain on the lifeline)

The team will then tie across by advancing left in the #A crosscut through the damaged stopping to the 2A intersection. *If team does not tie across dock under Underground Judge #1, Item 11.* The required GT's, ground checks, D&I's, etc. will be made. The team encounters smoke in entries 1, 2, and 3 at crosscut #A and #B. Smoke is in the entire problem until cleared. *If team does not stay connected to the life line dock them under Underground Judge #2, Item 9. If captain does not check the team members when entering smoke, dock them under Underground Judge #1, Item 12.*

**Team Stop # 3** (Team must remain on the lifeline)

The team will retreat to #3 heading and advance to #B crosscut at the 3B intersection. The required GT's will be made as indicated on the map.

**Team Stop # 4** (Team must remain on the lifeline)

The team will travel to the 2B intersection. They will find the refuge chamber and the judge will give them the contact information. The miner is alive in the refuge chamber but the unit has malfunctioned and there is only 15 minutes of oxygen left. The required GT's, D&I's and R&R's will be made as shown on the exploration map.

**Team Stop # 5** (Team must remain on the lifeline)

The team will travel thru the temporary stopping not intact, to the 1B intersection. The required GT's and D&I and R&R are shown on the map. During Team stops #3, #4, & #5 make sure the captain does not go inby (north) of the intersection more than 3 feet because of the 2X3 rule and the team has not tied back in the #1 Heading. (This means the area behind the Refuge Chamber in the #2 Heading and the Caved Airtight in the #3 Heading) *If captain or team member goes 3 feet beyond x-cut 2 without being tied in, dock under Underground Judge #1, Item 11. If captain does not D&I where necessary, dock them under Underground Judge #1, Item 9. Ground Checks at the caved airtight must be made, dock under Underground Judge #1, Item 8b. Gas tests where necessary Underground Judge #2, Item 1. Other discounts may apply.*

**Team Stop # 6** (Team must remain on the lifeline)

When the team reaches team stop #6, the team has explored all areas of 1, 2, and 3 entries to include #A & #B crosscuts except anything over 3 feet north of the intersections. The team will go back and get these areas and the captain will D&I and R&R these areas.

The team will build stoppings to ventilate the refuge chamber to rescue the miner in the refuge chamber. If the team does not build stoppings to ventilate to the refuge chamber and continues to explore beyond crosscut #B, the refuge chamber miner will die due to a lack of air in 15-20 minutes. *Dock the team under Underground Judge #1, Item 18 d. If the team builds the correct stoppings (see below) to get the miner and it takes longer than 115-20 minutes to rescue the miner, the team will not be discounted the 50 docks.*

**See Map for First Ventilation change:**

Temporary stoppings need to be built in the following locations shown on the Vent #1 Map in order to clear the air to the refuge chamber:

The team must inform the official in charge before opening the stoppings in #1 and #3 entries as this is a ventilation change.

*Underground Judge #2, Item12, for changing ventilation before informing the official in charge.*

The judges will now turn over the smoke placards that show clear air on the back and the judges will put down air direction arrows to show direction of air flow. Teams must recheck gases in areas they travel after a ventilation change. *Underground Judge #2, Item 1.*

Team will open the refuge chamber and find Jim Jones, he is standing and talking. He can be taken to the FAB.

**Continued exploration:**

**Team Stop #7** (Team must remain on the lifeline)

If the team ventilated, and did not explore beyond this point, they will build an airlock at their temporary stopping in #3 entry. *If the team does not build an airlock, dock them under Underground Judge #2, Item 10 (for failure to erect temporary stopping when necessary) and Underground Judge #2, Item 12, (for changing ventilation before the effects of such changes are known).*

**Team Stop #8** (Team must remain on the lifeline)

The team travels to the 3C intersection and GT's, D&I, R&R where required.

**Team Stop #9** (Team must remain on the lifeline)

The team travels to the 3D intersection and explores left to heading #2. They will GT where necessary. If the team goes to the barricade which is 5' in by the intersection dock them. *If captain or team member goes 3 feet beyond crosscut #D at the barricade or fire or shaft without being tied in, dock under Underground Judge #1, Item 11.*

**Team Stop #10** (Team must remain on the lifeline)

The team will travel to the 2D intersection where they will find the FEL on fire. It is located near the intersection and can be reached by the team to extinguish the fire when a team member simulates spraying the fire while holding a fire extinguisher. (D&I and GT will be made) Judges will turn over the placard which will tell the team the fire is extinguished.

*If team does not start controlling fire upon discovery dock them under Underground Judge #1, Item 13. If the team goes to the face dock them. If captain or team member goes 3 feet beyond crosscut #D at the extinguished FEL fire, dock under Underground Judge #1, Item 11.*

The captain will check the unsafe roof south of the intersection and D&I and GT will be made. The GT will be made to the west of the intersection. If the team asks for timbers, you can tell them they have been ordered and will be here in 2 about hours. *If any team members come in contact with the unsafe roof, dock under Underground Judge #1, Item 10 +15 points each team member.*

**Team Stop #11** (Team must remain on the lifeline)

The team explores to the 1D intersection. If the team goes all the way to the “Exhaust Shaft to the Surface” or more than 3’ north of the intersection dock them. *If captain or team member goes 3 feet beyond crosscut #D at the extinguished FEL fire, dock under Underground Judge #1, Item 11.* GT will be made where required.

**Team Stop #12** (Team must remain on the lifeline)

The team will finally tie back to the 1C intersection and the required D&I’s, R&R’s and GT’s will be made at the unsafe roof and caved airtight.

**Team Stops Beyond #12** (Team must remain on the lifeline)

Now the team can retreat back and make all the face/shaft cut through, face in #2 and the barricade in #3. GT’s, D&I’s, & R&R’s where necessary.

The team will try to make contact with the barricade but there will be no response. Now all areas of the mine have been made except behind the barricade and the unsafe roof areas. The unsafe roof areas and caved areas can not be made safely.

### **Second ventilation change:**

Temporary stoppings need to be built in the following locations shown on the Vent #2 Maps.

The team must confer with the official in charge before opening the airlock/stopping in #3 entry between crosscut #B and #C as this is a ventilation change. *Underground Judge #2, Item 12, for changing ventilation before informing the official in charge.*

When the team builds the necessary stoppings and opens the airlock/stopping they installed in #3 entry, the judges will turn over the smoke placards to show clear air and the direction of air flow. Teams must recheck gases in areas they travel after a ventilation change. *Underground Judge #2, Item 1.*

### **Team Stop Barricade**

A wing curtain is used to clear the air in front of the barricade. The judges turn over the smoke placard as soon as the team has the wing curtain positioned from the pillar corner pointing toward the northeast.

The team enters the barricade and makes a gas check. The captain checks ground conditions, gas checks made, D&I, etc. Team must build an airlock as conditions are not known behind the barricade. The team will find two persons behind the barricade and after they do a primary survey they will be given the information that one miner is alive and the other is dead. The captain must D&I the locations of the persons and D&I the face. The live miner is walked out of the mine. *If the team does not build an airlock, dock them under Underground Judge #2, Item 10 (for failure to erect temporary stopping when necessary) If the team does not clear air in front of barricade and enters, dock under Underground Judge #1, Item 18a. If the team does not recheck gases before re-entering areas cleared of smoke and gas, dock under Underground Judge #2, Item 1. Other discounts may apply.*

If all areas have been explored, live miner brought to the FAB, and the fire extinguished, the team turns in the map and the captain stops the clock.