

# 2014 Southeast Region Mine Rescue Contest

## Team Exploration Solution

Captain must mark date and team position number on the board at FAB and start the timing device. *If captain fails to DI, dock under Surface judge #1 item 8.*

### 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 are not made under UG Judge #1 item 9. (2x each place) If the teams fails to make gas checks at each temporary stopping dock them under UG Judge #2 item 1. (1x each place)*

### Team Stop #1

The team will build an airlock in #1 heading (captain must check roof and rib prior to build). The 50' apparatus check (AP) must be conducted at team stop #1 (or #2). The captain will check ground conditions, D&I, etc. **Note team can airlock into either temporary stopping in #1 heading or #3 heading.**

*If the team does not build an airlock, dock them under UG Judge #2, Item 10 (for failure to erect temporary stopping when necessary)(10 discounts) and UG Judge #2, Item12, (for changing ventilation before the effects of such changes are known)(15 discounts).*

*If team does not make a 50' apparatus check, dock them under Underground Judge #1, Item 3 (4 discounts)*

*If the captain doesn't check the roof and rib prior to building airlock, dock them under UG Judge #1Item 8b3 (5 discounts) other discounts may exist.*

**Team Stop #2** The team encounters smoke once they break through the temporary stopping. The team must count off and be on the life

line. Captain will take the necessary exploration gas test as shown on the map. The captain will find unsafe roof to the North stretching from rib to rib, the captain will D&I. While stretching toward 2A heading crosscut the captain will find unsafe roof stretching from rib to rib, the captain will D&I.

*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 other discounts may exist.*

### **Team Stop #3**

The team will retreat through #1 Heading airlocking on the way out. (Captain must check roof and rib prior to build)

*If the team does not build an airlock, dock them under UG Judge #2, Item 10 (for failure to erect temporary stopping when necessary)(10 discounts) and UG Judge #2, Item12, (for changing ventilation before the effects of such changes are known)(15 discounts).*

*If the captain doesn't check the roof and rib prior to building airlock, dock them under UG Judge #1Item 8b3 (5 discounts) other discounts may exist.*

### **Team Stop # 4**

The team will travel to #3 heading and build an airlock to gain access to #3 heading. (Captain must check roof and rib prior to build)

*If the team does not build an airlock, dock them under UG Judge #2, Item 10 (for failure to erect temporary stopping when necessary)(10 discounts) and UG Judge #2, Item12, (for changing ventilation before the effects of such changes are known)(15 discounts). other discounts may exist.*

### **Team Stop # 5**

The team will breach the temporary stopping and encounter smoke the team must count off and be on the life line and stop in the intersection 3A. While tying across the 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 #2 judge who will write the readings down on the judge’s map. The team will make necessary gas checks and the captain will D&I the unsafe roof to the West. *If team does not make the “hooded” gas check on the detector, dock them under Underground Judge #2, Item 4 for each incorrect reading other discounts may exist.*

*15 docks X 4 = 60 docks.*

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

The team travels North in #3 Heading to crosscut 3B. The team will make necessary gas checks and the captain will D&I the permanent stopping to the West. **Note the team may choice to set the posts at this time.**

*If captain or team member goes 3 feet beyond x-cut B 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 other discounts may exist.*

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

The team will retreat to crosscut A to set posts through the unsafe roof (2A). The captain will check roof and rib prior to installing posts. The team will need to install 12 posts to safely tie in the entire area. (see page 36 figure 3) *This may cause some teams heartburn. When traveling north and south directions you are posting from bad ground to good ground. Unfortunately, the example in the rules does not specify direction of travel once the initial eight posts are set. If the team doesn't use the proper method to set posts the team will be docked for team endangerment for every person that travels through the unsafe area*

*(each occurrence) UG Judge 1 Item 10 (15 discounts per) other discounts may exist.*

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

The team will travel North and find a stopping with a man door open the captain will DI the stopping, the second door will be closed and the team will be able to air lock into the shop using the doors. *If the team does not airlock, dock them under UG Judge #2, Item 10 (for failure to erect temporary stopping when necessary)(10 discounts) and UG Judge #2, Item12, (for changing ventilation before the effects of such changes are known)(15 discounts) other discounts may exist.*

**Team Stop #9**

The team travels to the 2B intersection and finds a miner the team will need to put an apparatus on the live person to transport him to the FAB. While the team is putting on the apparatus the captain can D&I the location of the patient and continue exploring in the shop and make other required checks. *If the team does not put an apparatus on the live patient and takes him to the FAB dock them UG Judge #1, Item 18D other discounts may exist.*

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

The team will exit the shop with the patient and air lock on the way out at both locations. The team will travel back to the FAB with the patient.

*If the team does not airlock, dock them under UG Judge #2, Item 10 (for failure to erect temporary stopping when necessary)(10 discounts) and UG Judge #2, Item12, (for changing ventilation before*

*the effects of such changes are known)(15 discounts) other discounts may exist.*

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

The team has brought the first missing miner to the FAB.

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

The team will go back into the mine through #1 heading and airlock in and travel to the unsafe roof in #1 heading between A & B crosscut to set post to tie in. The captain will check roof and rib prior to installing posts. The team will install 4 posts following figure 1 on page 34.

**Note the team may go to #3 heading as well.**

*If the team doesn't use the proper method to set posts the team will be docked for team endangerment for every person that travels through the unsafe area (each occurrence) UG Judge 1 Item 10 (15 discounts per) other discounts may exist.*

**Team Stop #13** (Team must remain on the lifeline)

The team will travel North to 1B and make all required checks and will find a permanent stopping half way between #1 and #2 heading. The captain will D&I the stopping and the team will conduct gas checks. At this time the team has tied in crosscut B and can access crosscut C.

**Note: If the team goes beyond 3 feet toward crosscut C prior to installing posts in #1 heading and #2 heading the team will be docked for 2+3 rule due to the area is accessible.**

**Team Stop #14** (Team must remain on the lifeline)

The team will travel North to C crosscut in heading #1 will make all required checks. The team will make required checks as noted on the map.

**Team Stop #15** (Team must remain on the lifeline)

The team will travel East to #2C heading crosscut and make all required checks. The team will make required checks as noted on the map.

**Team Stop #16** (Team must remain on the lifeline)

The team will travel East to #3 heading in crosscut C to tie in this crosscut. The team will make required checks as noted on the map.

**Team Stop #17** (Team must remain on the lifeline)

The team will retreat to 1C and then travel North to 1D where the team finds an obstacle fire on a LHD. As per the Mine Rescue module a team must use 2 fire extinguishers simultaneously from different directions to extinguish the fire. Once the fire is extinguished the captain will identify unsafe roof on the left side and will need to set posts to access. The captain will check roof and rib prior to setting posts and will need 3 posts to safely enter. (Figure 1 on page 34)

**Using Extinguishers on an Obstacle Fire**

If you encounter an obstacle fire with flaming equipment at the center, the fire should be fought by two people using hand-held extinguishers. It is difficult and sometimes impossible for one person to put out this type of fire. The two firefighters should approach the fire together from the intake air side, holding the extinguisher nozzle downward at a 45 degree angle. Both streams of dry chemical should be directed to 6 inches ahead of the flame edge. The two firefighters should split up and slowly advance around each side of the obstacle,

trying to keep up with each other as much as possible. Each person should cover two-thirds of the fire area, using a side-to-side sweeping motion. When the fire appears to be extinguished, both firefighters should remain on the alert for a short time just in case the fire re-ignites.

If they do not use the two fire extinguishers in this manner, the judges will not extinguish the fire. The team will then have to seal the fire and regulate the corner and the team will not find the body next to the LHD and will not be able to explore the entire mine. If the fire is extinguished the captain will make all the required checks at the fire and check roof and rib and the team will need to post to access the left side of the LHD where they will find a miner dead.

*If the team doesn't use the proper method to set posts the team will be docked for team endangerment for every person that travels through the unsafe area (each occurrence) UG Judge 1 Item 10 (15 discounts per).*

*If the team does not use the proper method to extinguish the fire with the two extinguishers and has to seal the fire, the team will be unable to find the body. Dock them under UG #1, item 16 for failure to locate body. Other discounts may apply other discounts may exist.*

**Team Stop #18** (Team must remain on the lifeline)

The team will travel to 2D and make required checks the captain will DI the loaded face and make sure the area is secure. The team will find a lunch box between 2D and 3D that will have a note inside (Help, Help, I am behind barricade in the #3 face.)

**Team Stop #19** (Team must remain on the lifeline)

The team will travel to 3D and make the required checks the team will discover a Barricade and no response from the barricade. The atmosphere is not safe to break through the barricade so the team will have to clear the air in front of the barricade. At this time the team has explored all areas and are ready to ventilate due to 1 miner is still missing. When the team reaches the barricade in the #3 face

and has decided to ventilate to rescue the miner inside, Judge #1 will give the team a message stating (**The Main Fan is down, the motor bearing is hot. Estimated repair time 2 hours.**) This will cause the team to ventilate using the exhaust fan located in the shop.

### Ventilation change see map

### 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 one person behind the barricade and after they do a primary survey they will be given the information that the miner is alive. The captain must D&I the location of the person and D&I the face. The 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 miners brought to the FAB, and the fire extinguished, the team turns in the map and the captain stops the clock.