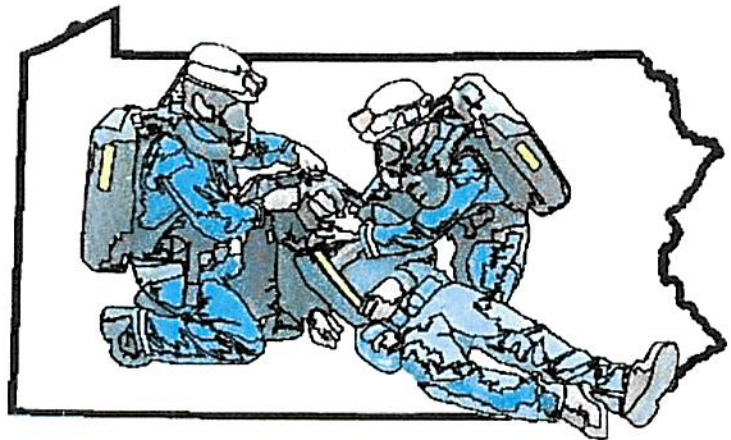


Blue  
foam  
marion

**2024**

**Pennsylvania  
PBSA  
Contest**

Mine Rescue  
Contest  
Day 1



July 15, 2024

## PA 2024 Day 1 Statement

Thank you for responding to our call for help. Last night four men went into the mine to perform maintenance work. None of the men have come out of the mine and we have not been able to contact them. The mine has a history of poor roof conditions and high methane concentrations. We were able to establish a fresh air base by utilizing blowing ventilation. There is a backup mine rescue team here to assist you. Please help us find our missing miners.

## PA 2024 Day 1 Problem

- The mine is ventilated with a blowing fan that cannot be stopped, stalled or reversed.
- Locate the missing miners and bring survivors to the fresh air base.
- Teams may only carry two brattice cloths at a time.
- Explore all areas of the mine if it can be done so safely.
- The mine maps are not up to date.
- The pump can be started upon request, once started it cannot be shut off.



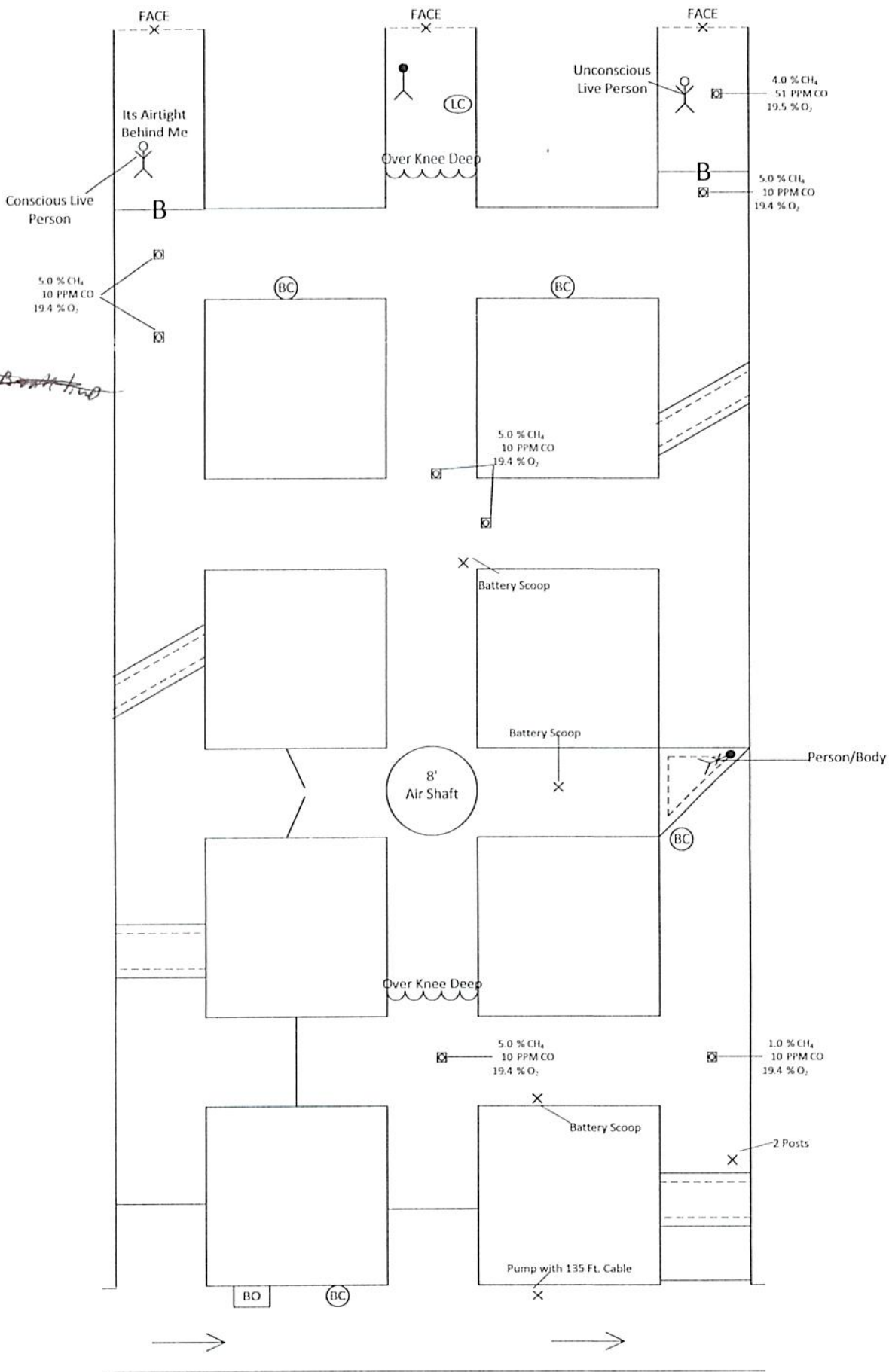
## PA Mine Rescue Contest 2024 Day #1 Problem Keys

- Between the fresh air base and A x-cut the captain must date and initial the three temporary stoppings. A gas test must be made in #1 and #2 entries. The teams may airlock #1 entry or #2 entry to enter the mine. When the entire team enters the mine, they must perform their 50-foot apparatus check.
- If the team airlocks into the #1 entry A intersection the captain will make a gas check as soon as he opens the temporary stopping. The captain will perform a roof and rib test at the unsafe roof between A and B x-cuts. A gas test must be made inby the intersection in #1 entry and between #1 and #2 entry x-cut. The captain must date the temporary stopping.
- If the team airlocks through the temporary stopping between #1 and #2 entries of A x-cut. The captain will make a gas test as soon as he opens the temporary stopping. The captain will make his reach in all directions. A gas test must be made in all directions from the intersection. The captain will date and initial at the over knee-deep water.
- When the team travels to #3 entry at A x-cut the captain will extend his reach in all directions. Gas tests must be made inby and outby the intersection. The captain will discover 4 posts outby. The captain will roof and rib test and date and initial the unsafe roof.
- The team has no choice but to travel to #3 entry B x-cut. Prior to any team member besides the captain entering the intersection the captain must start his zig-zag roof and rib test. When the captain becomes perpendicular to the person located in the diagonal unsafe roof, he must stop his roof and rib test and post to the person using 4 posts. The captain must date and initial the location of the person. When the captain touches the person placard it will be turned over to reveal a body. The captain must then finish his roof and rib test making the intersection safe.
- See vent #1 for clearing the gas in #2 entry A x-cut. After the gas is cleared the teams must place the pump into the knee-deep water and have the pump energized. As soon as the pump is placed in the water and energized the water will disappear. When the pump is energized it cannot be de-energized.
- When the team proceeds to #2 entry B x-cut. The captain must date and initial the airshaft. A gas test must be performed inside of the airshaft. The captain must extend his reach in all directions. The captain must perform a roof and rib test and date and initial at the unsafe roof. A gas test is required in all directions from the intersection.
- At team stop #6 a gas test is required inby and outby. The captain must perform a roof and rib test and date and initial the unsafe roof inby and outby.
- Team stop #7 must be in #2 entry C x-cut. Captain must make his reach in all directions. Gas tests are required in all directions.
- Team stop #8 must be #3 entry C x-cut. Captain must make his reach inby and outby. Captain must perform a roof and rib test and date and initial at unsafe roof outby and inby. Gas tests are required inby and outby.
- Team stop #9 must be in #1 entry C x-cut. Captain must make his reach inby and outby. Captain must perform a roof and rib test and date and initial at the outby unsafe roof. Gas tests are required inby and outby the intersection.
- Team stops #10 and #11 can be in #1 or #2 entry D x-cut. In #1 entry the teams will find a gas box in the intersection and a barricade at the inby rib line of the intersection. The captain must check for a response at the barricade and date and initial the barricade. A gas test is required in the intersection and when tying outby. The team will get a response from behind the barricade of help get me out it is airtight behind me. Tying the team to that response.

## PA Mine Rescue Contest 2024 Day #1 Problem Keys

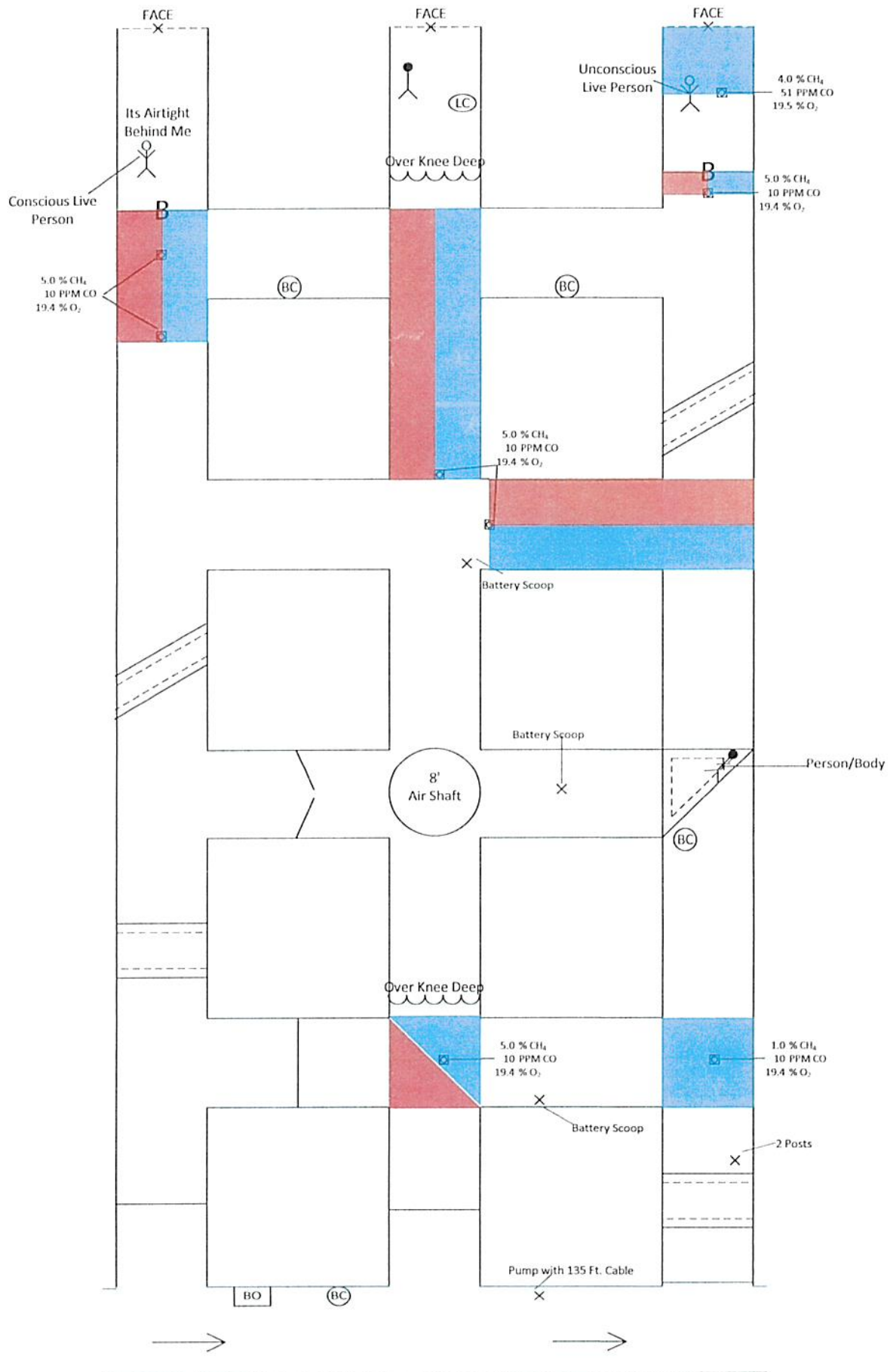
- At #2 entry D x-cut the captain must extend his reach in all directions. Gas tests are required in all directions not previously explored. The captain must date and initial the over knee-deep water. The teams do not have a means to ventilate so they must explore over to #3 entry Dx-cut.
- At #3 entry D x-cut the captain must extend his reach inby and outby. The captain must check the barricade for a response. There is no response at the barricade. The captain must date and initial the barricade. A gas test is required inby and outby the intersection. The captain must perform a roof and rib test and date and initial the unsafe roof outby.
- See Vent #2 for builds for clearing the gas in front of the barricade in #1 entry D x-cut. Once the gas is cleared the teams must enter the barricade immediately because of the it is airtight behind me response. If the team airlocks into the barricade penalize them for delay of patient. When the captain opens the barricade, he must make a gas test. When the captain gets to the conscious live person, he must touch the person and ask the person if he is okay. The captain then must date and initial the persons location. The captain must perform a roof, rib and face test at the face, and date and initial at the face. The team must remove the patient to the fresh air base.
- See vent #3 for builds to clear the gas in #2 entry to enable the teams to pump the water over knee deep in #2 entry inby D x-cut. Team must know take the energized pump straight up #2 entry and place the pump into the over knee-deep water. As soon as the pump is placed into the water the water disappears. The captain must touch and date and initial the location of the body. The captain must perform a roof, rib, and face test and date and initial the face. The team must remove the line curtain and set up ventilation for the barricade in #3 entry.
- The pump must be moved outby the airshaft in #2 entry B x-cut prior to extending the line curtain to sweep the gas in front of the barricade. See vent #4 for builds prior to venting the gas in front of the barricade.
- The team must airlock into the barricade. Once the barricade is opened the captain must perform a gas test. The captain must touch the unconscious live person and date and initial his location. The team must perform a patient assessment of the unconscious person by checking for the absence of breathing or gasping, checking for a carotid pulse and looking for life threatening bleeding. Once the assessment is complete the patient must be loaded onto the stretcher for removal to the fresh air base. The care-vent must be placed on the patient due to the 51ppm of CO making an irrespirable atmosphere. The captain must perform a roof, rib, and face test at the face.

## DAY 1

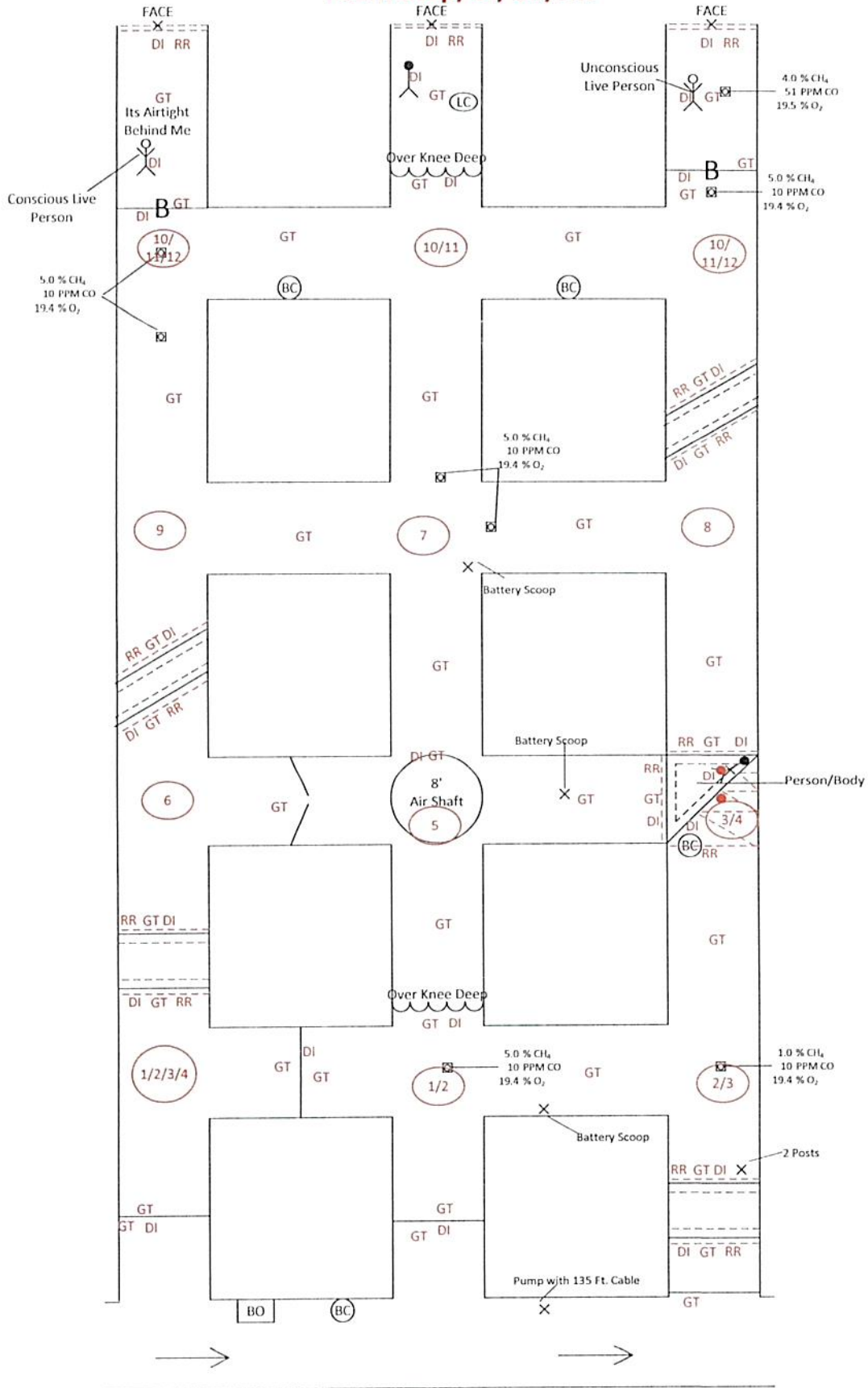




# DAY 1 EXTENT OF GAS



**DAY 1**  
**Team Stop/DI/GT/RR**





# DAY 1 VENT 1

