



**2023 NMRA
POST 5
MINE RESCUE
CONTEST
DAY 2**

Statement

Welcome to Mountaineer Coal Company, Mylan Portal and thank you for responding to our call for help. You will begin exploration in the 3 Right Section. A fresh air base has been established, along with communication at the command center.

Last night on midnight shift a foreman and 5-man crew entered the section to perform regular maintenance and set up work. The crew had to walk in a few blocks to get to the section due to track work being done. Around 5 am the foreman called out and said they had an inundation of methane and low oxygen levels. He also stated that when they tried to leave the section they ran into even lower levels. He said they would try to get out and we haven't heard from them since.

We sent rescue teams in, and they were able to locate 2 crew members walking out of the section using self-rescuer units. They told them the rest of the crew headed back into the section. Rescue teams worked on advancing fresh air and have made it to within 5 blocks of the face.

This area of the mine produces high methane levels and has a history of bad roof and rib conditions. The mine is ventilated by an exhausting fan which is located on the surface and is running. All power inby the fresh air base has been de-energized, locked and is guarded. A back up mine rescue team is on site. Please find our missing miners.

Good luck and be safe.

Problem

Instructions to the Team

Account for all missing miners and bring all survivors to the Fresh-air base.

Explore all areas of the mine that can be explored safely.

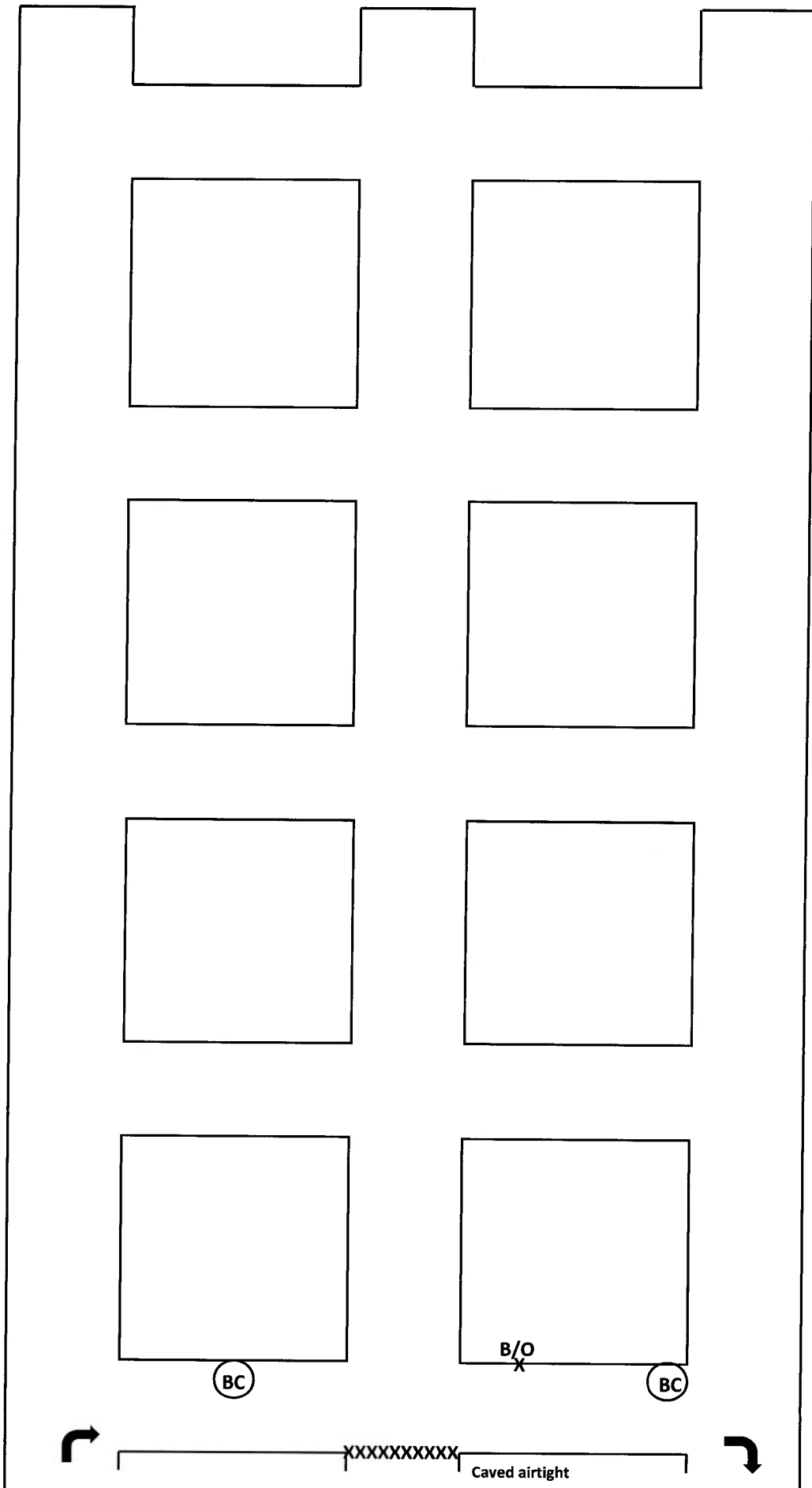
Exhausting fan is running. Fan cannot be stopped, stalled, or reversed.

Entries are numbered left to right with the left entry being number 1 entry the middle number 2 entry and the right being number 3 entry. Air intakes up the number 1 entry and returns out the number 3 entry.

If power is needed in the section you can request power be re-established by getting permission from the Superintendent.

If the team wishes to use the materials of a barricade for a ventilation structure at a different location, ask the judge for a brattice build. We do not want the barricade materials moved to another location, just show the barricade on your map as you left it.

There is a 75 Minute time limit.



5.5% CH4
0PPM CO
19.5% O2

4.9% CH4
0PPM CO
19.3% O2

Live con:

X

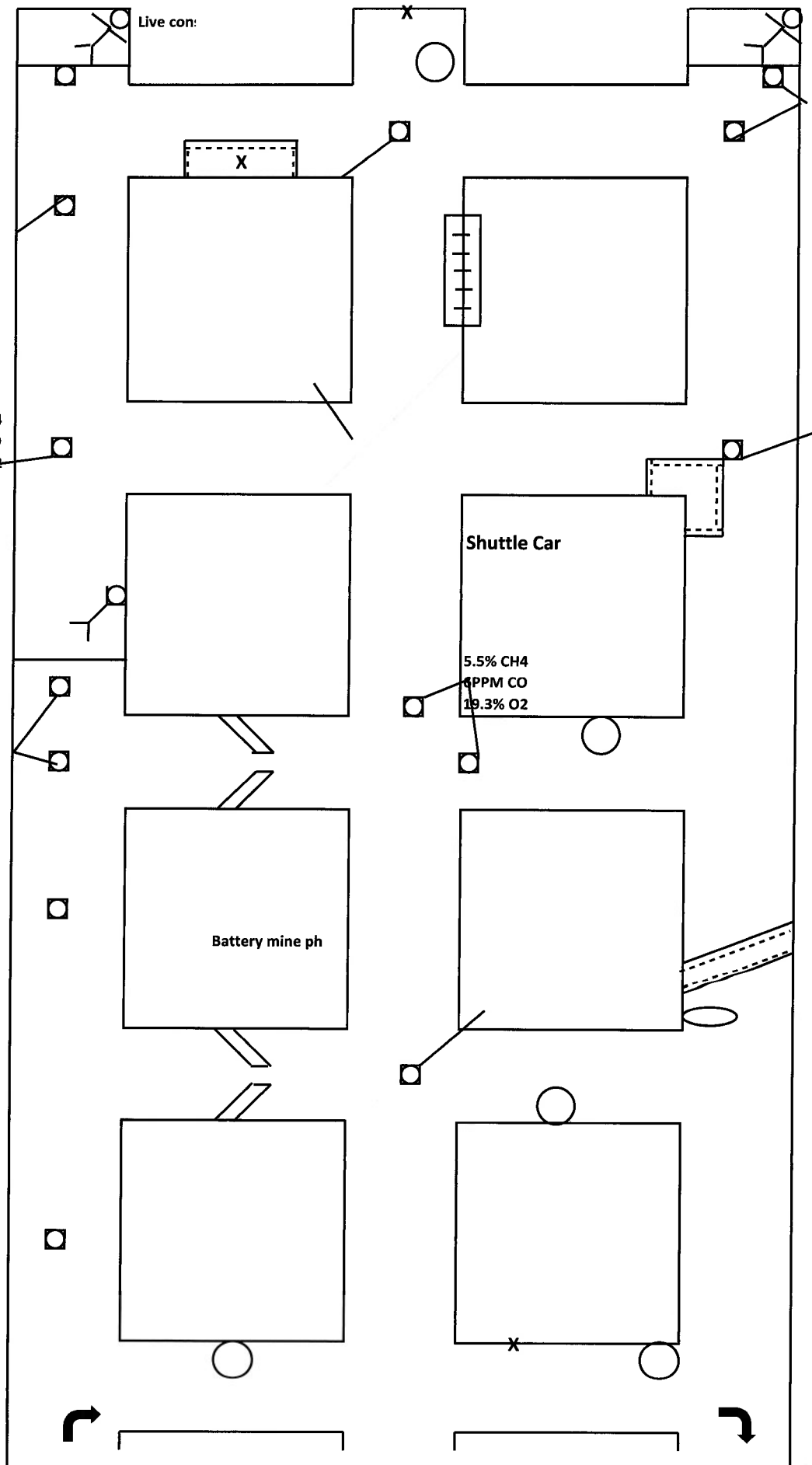
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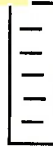
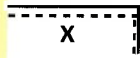
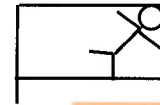
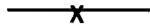
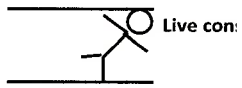
Shuttle Car

5.5% CH4
0PPM CO
19.3% O2

Battery mine ph

X





5.5% CH4
0PPM CO
19.5% O2

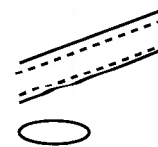
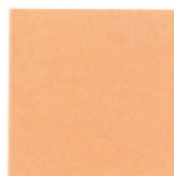


Shuttle Car

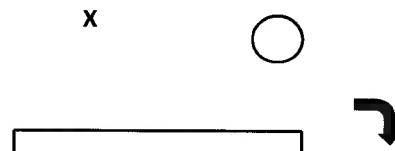
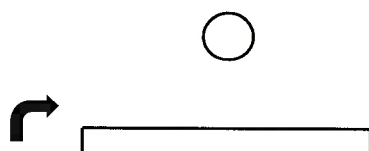
5.5% CH4
6PPM CO
19.3% O2

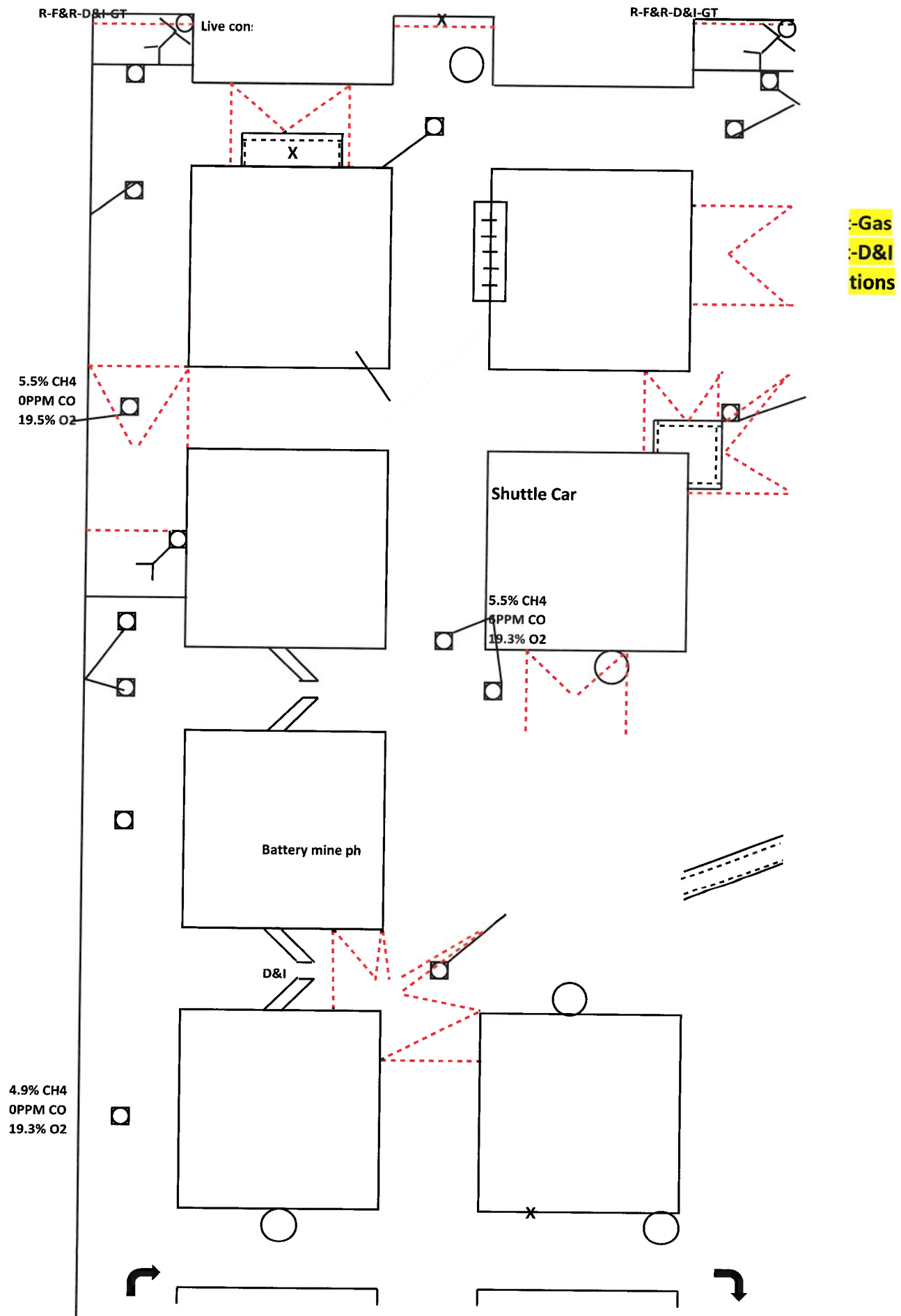


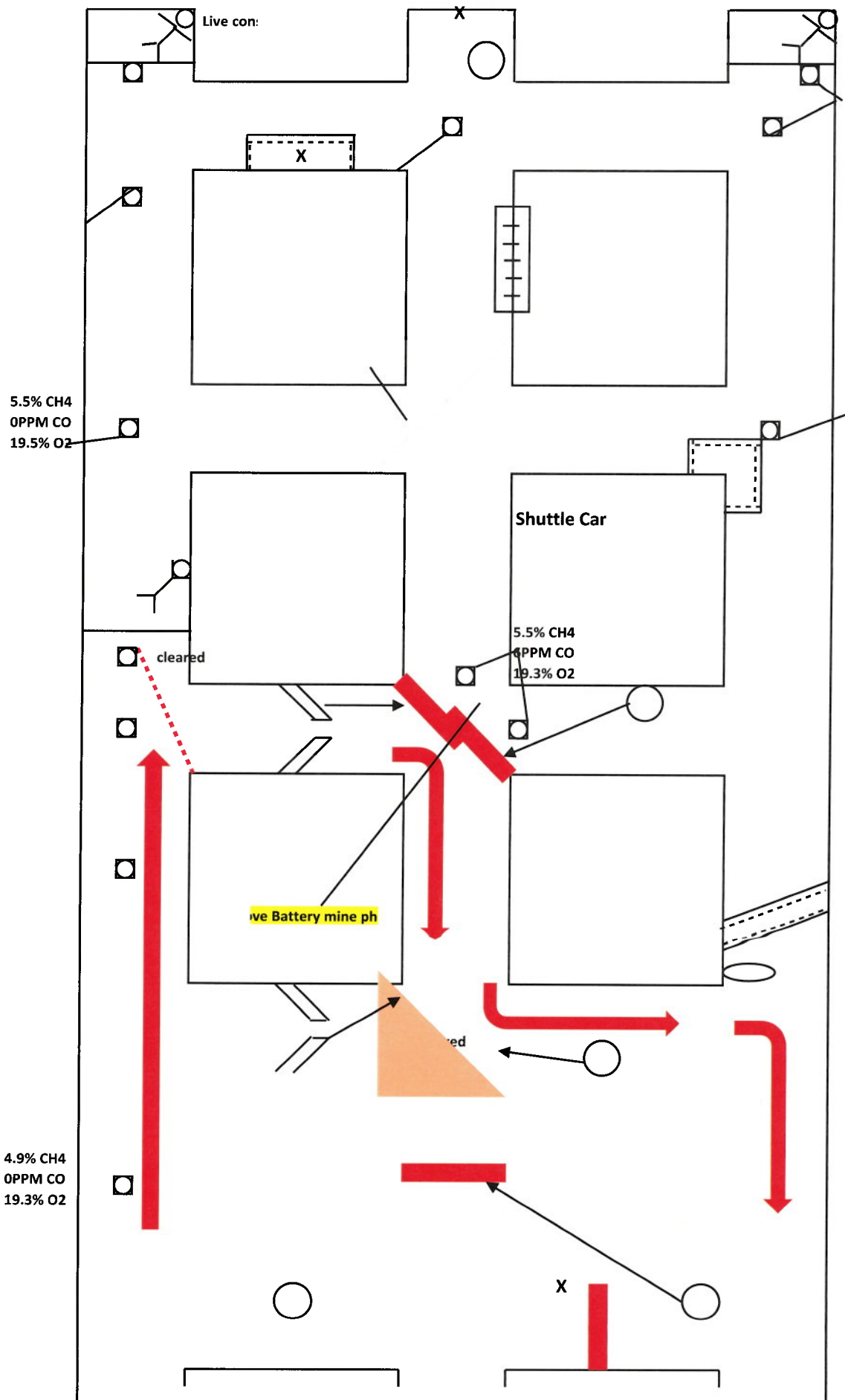
Battery mine ph

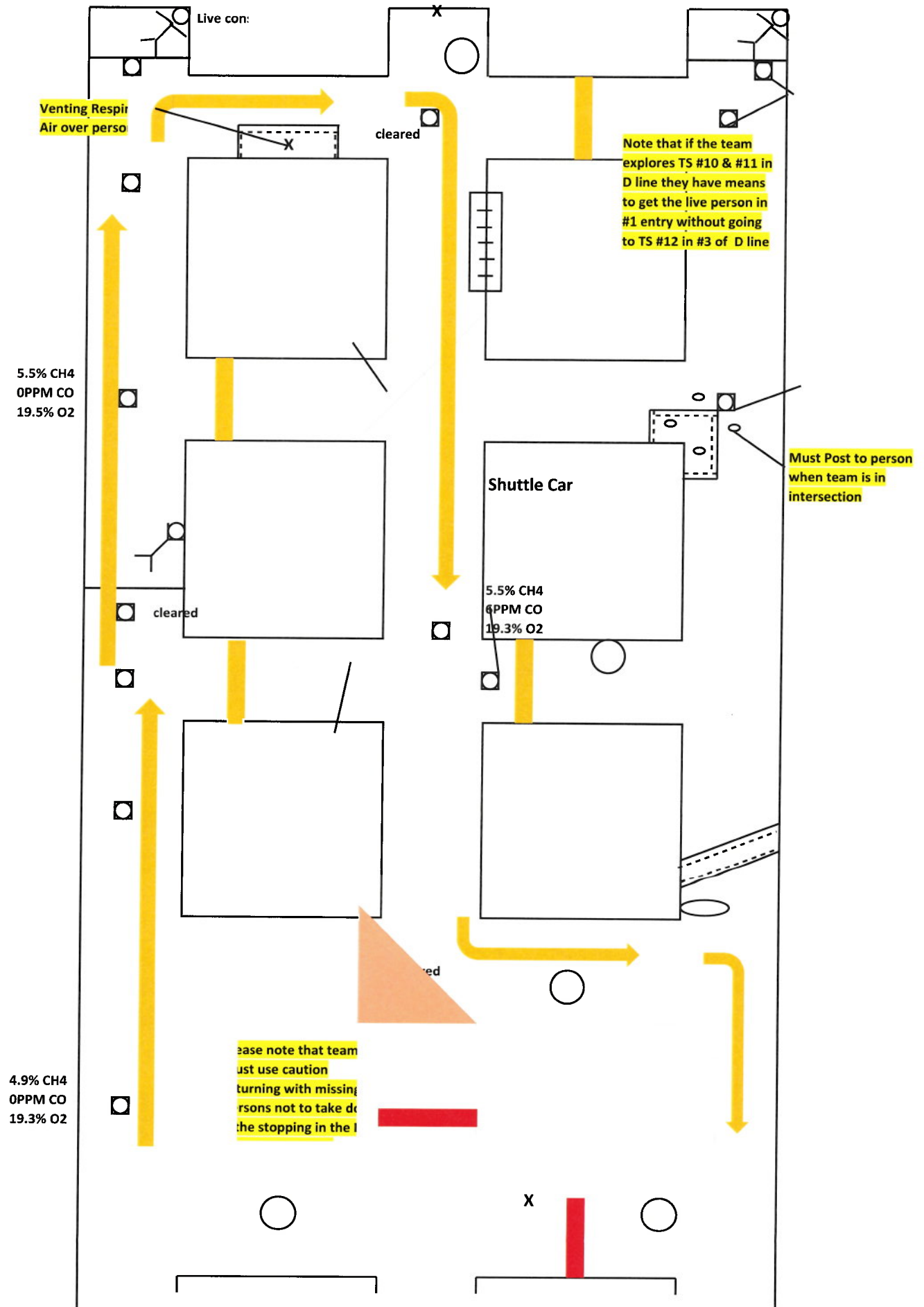


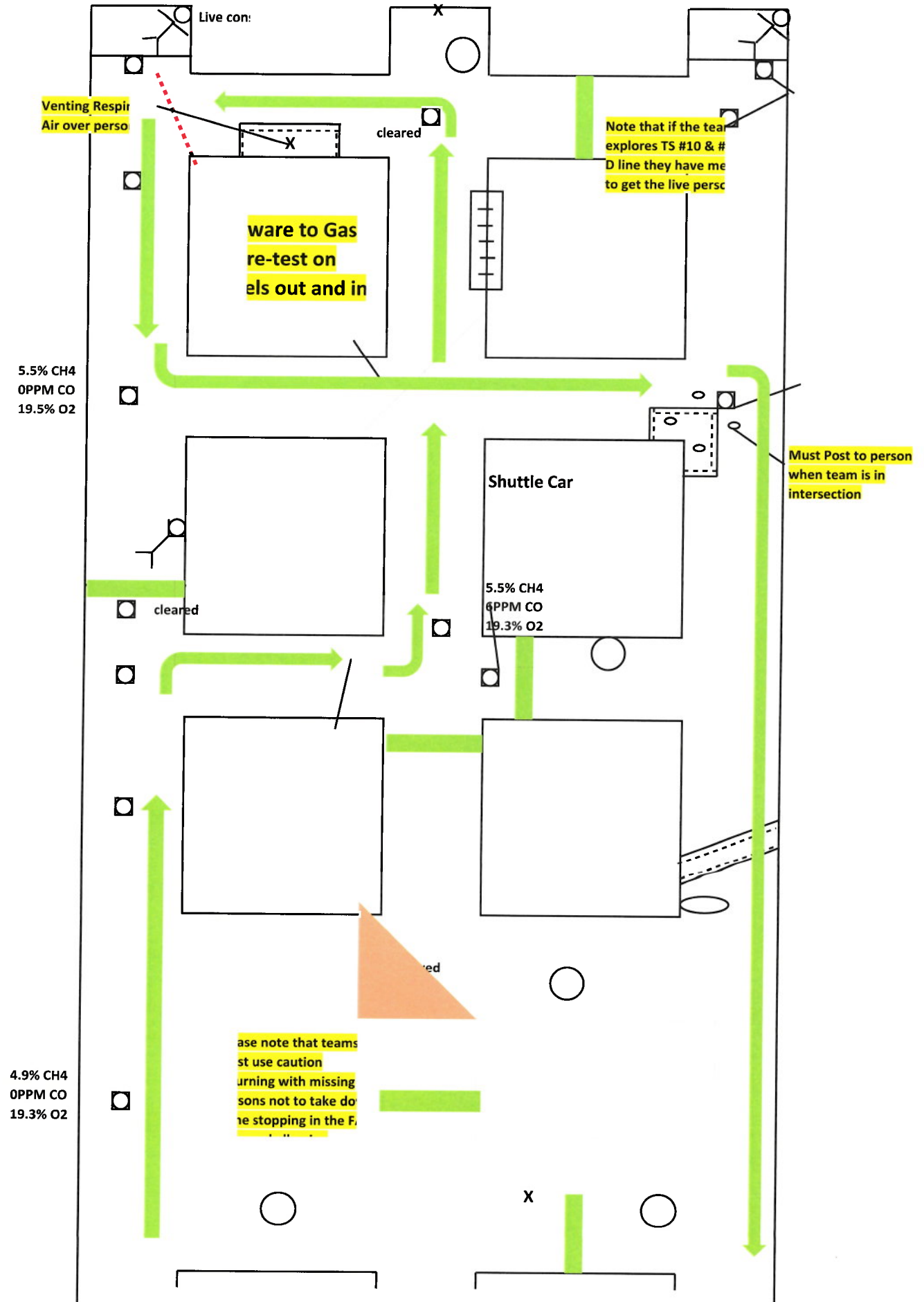
4.9% CH4
0PPM CO
19.3% O2

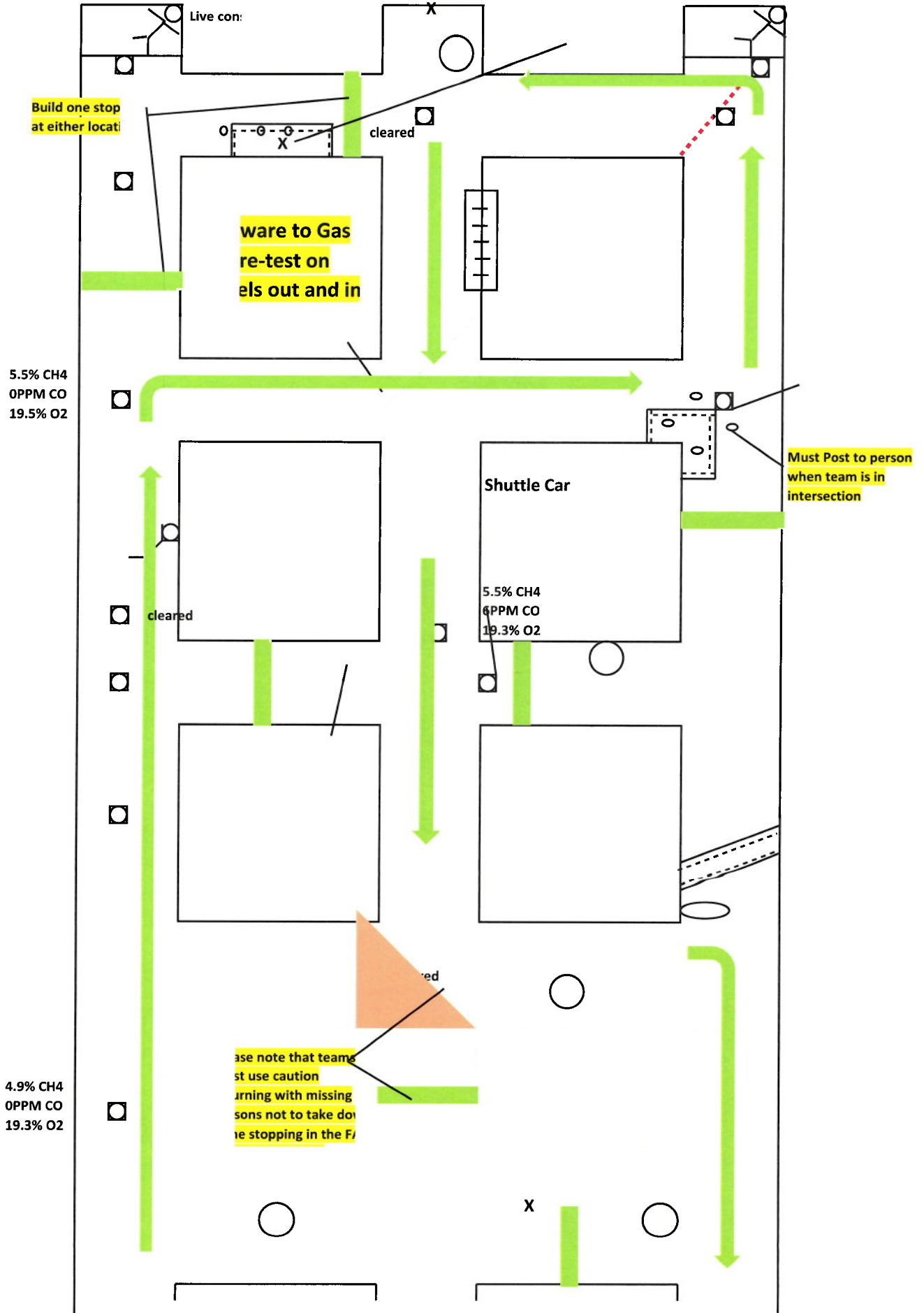


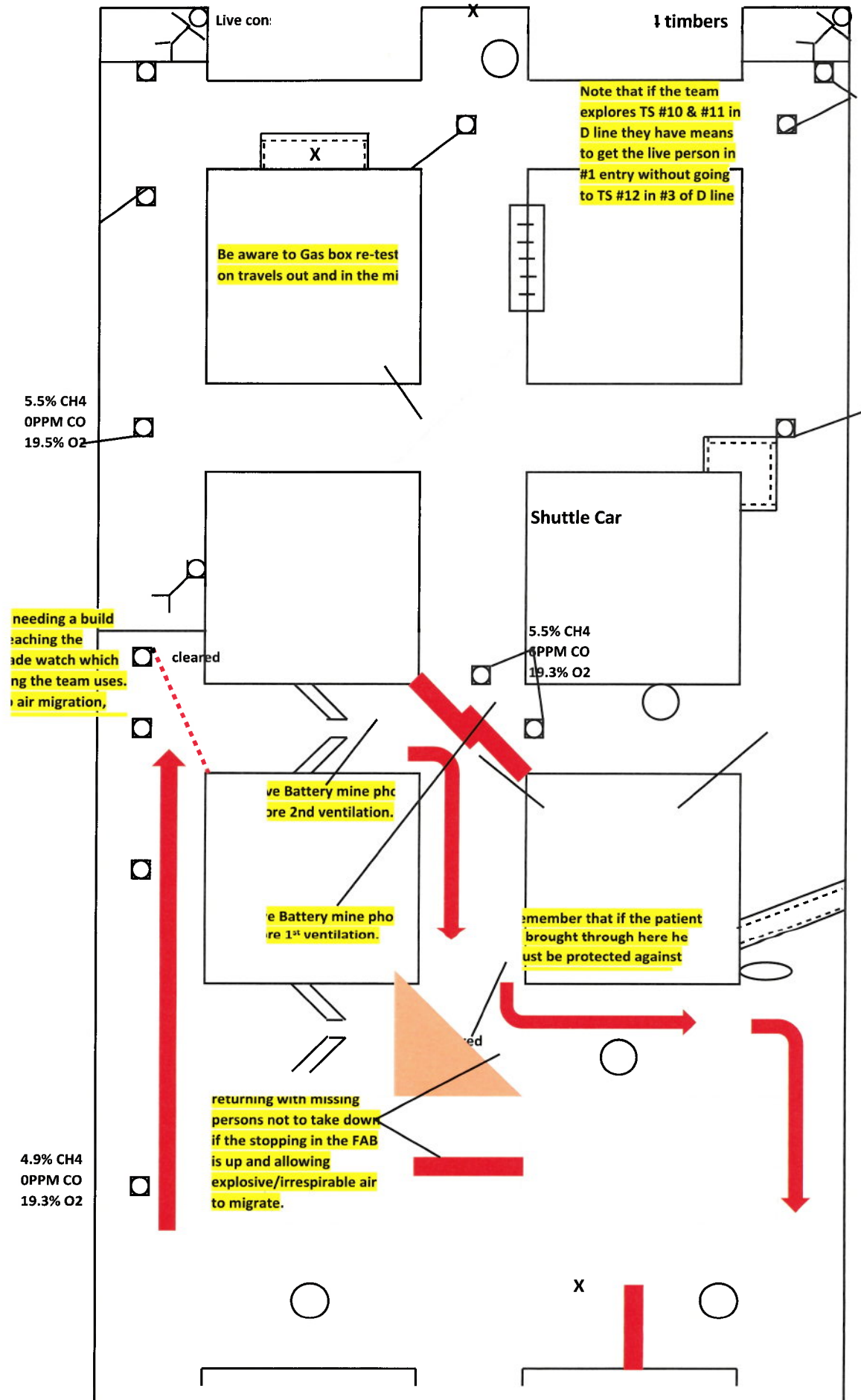












Team Stop No. 1,2,3,4,5

When checking openings team locates a contaminant in the #1 entry (4.9%CH₄, 0PPM CO, 19.3% O₂) Teams can advance in #1 or number #2 to first intersection in by FAB the A-line. Teams will locate a contaminant in the #1 Entry in by the first break, Team will also locate a contaminant in the #2 intersection (5.5% CH₄, 6PPM CO, 19.3%O₂). This Gas is also in the caved area in the #2 intersection of the A-Line. Teams must use caution not to ventilate the gas in the caved area during the working of the problem. Teams can advance to team stop 4 in either #1 or #2 entry of the B line. Team will locate a contaminant in the #1 intersection at the 2nd break of (5.5% CH₄, 6PPM CO, 19.3%O₂). Teams will encounter a barricade in the #1 Entry 2nd break with a Contaminant of (5.5% CH₄, 6PPM CO, 19.3%O₂) in front of it with a Response of "Help Get Me Out!" Team is now tied to this Patient. Team has the means to ventilate prior to making advance to the #6 team Stop. **SEE VENT MAP #1** If team advances to #6 team stop prior to ventilating team will be discounted for Delay of Patient. Teams will have to move the battery mine phone to the 2nd break number 2 intersection and isolate it by building a diagonal stopping to ventilate. After clearing the gases at the barricade teams will have to airlock into barricade. Once barricade is breached they will encounter a live conscious person they will also find 4 timbers. Team can bring patient out #1 without use of carevent or self rescuer. If they come out number 2 they must protect patient's airway due to remaining irrespirable in the #2 intersection behind diagonal.

Team Stop 6,7,8,9

Team stop #6 will be in the #3 entry 2nd break. In by on this stop they will encounter the start of a wrap-around of unsafe roof. The captain will start the Roof Test. Stop 7 can either be in the #2 or #3 entry of 3rd Break. Teams will encounter a missing person in an area of Unsafe roof in the #3 entry 3rd break. Once captain enters intersection while performing roof and rib test of unsafe all objects in the intersection are now known. Team captain is now committed to posting to missing person prior to breaking rib lines and leaving intersection. If captain explores in by rib lines prior to posting for missing person they will be discounted for delay of patient. Captain will post to the missing person finding a body. Teams will also find a contaminant in the #3 intersection of (3.5% CH₄, 0PPM CO and 19.3%O₂). Teams will also find a contaminant in the #1 intersection of the 3rd break of (5.5%CH₄, 0PPM CO, 19.5% O₂). Teams also find a contaminant in the #1 entry in by the 3rd break of (5.5%CH₄, 0PPM CO, 19.5% O₂).

Team Stop 10,11

Teams will either advance up #1 or #2 entry to the 4th break. They will encounter a contaminant in the #2 intersection of #2 entry (5.0%CH₄, 0PPM CO, 19.5%O₂). They will also encounter a Person in an elongated unsafe roof on the outby rib of the crosscut between 1 and 2. Teams will also encounter a barricade in the face of #1 entry in the 4th break with a contaminant in front of it of (4.9% CH₄, 0PPM CO, 19.2%O₂) They will get a response from the barricade of "Help Get me Out its airtight behind me". The Team is now committed to the barricade and must ventilate prior to going to team stop #12 or they will be discounted for delay of patient. **SEE VENT MAP 2 and 3.** Teams must protect missing person in the unsafe by not passing irrespirable over the person. Once contaminant in front of barricade is clear teams can breach barricade where they will encounter a live conscious person. Teams must be careful when bringing patient out that they do not bring patient through the irrespirable gas left over in the #2 intersection of the 1st break without protection of the patient's airway.

Team Stop 12

At team stop 12 teams will locate a contaminant in the intersection of (5.1% CH₄, 0PPM CO, 19.2%O₂). Teams will also encounter a Barricade in the face of the #3 Entry with a contaminant in front of it (5.1% CH₄, 0PPM CO, 19.2%O₂). There will be no response from the barricade and teams must ventilate to clear contaminants. **SEE VENT #4.** After ventilating barricade teams will then airlock into barricade. Once breaching the barricade teams will encounter an unconscious live person. Teams will also locate 4 timbers. Teams must be careful when bringing patient out that they do

not bring patient through the irrespirable gas left over in the #2 intersection of the 1st break without protection of the patient's airway.

After bringing patient back to FAB they will need to go back in to account for the last missing person by posting to the person in the elongated unsafe roof. The Person will be a body once captain acknowledges them. **ALL PEOPLE ARE NOW ACCOUNTED FOR AND ALL AREAS HAVE BEEN EXPLORED.**

