

**Coal Mine
Mine Rescue Contest
Delta, Colorado
July 17th – 19th, 2012**

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STATEMENT

July 18th, 2012

You are currently located at a fresh air base established on the main intake at the mouth of the 1st Left Section.

Last night a crew of 7 mechanics went into the 1st Left Section to conduct routine maintenance. They were the only ones who entered the mine. About halfway into their shift the outside man said that he heard a loud bang and then felt a major flow of air and dust reverse itself back out of the main intake. The main intake only temporarily reversed itself and it has now returned to normal. The outside man has also tried to contact the 7 mechanics, but he has not heard anything from them.

The first mine rescue team to respond has successfully explored all areas of the mine except the 1st Left Section. They have set up this fresh air base at the mouth of the 1st Left Section.

This mine does not liberate a lot of methane, which was last measured at ½ million cubic feet per day. The roof conditions are fairly good and we are able to hold a smooth roof with our current 4' x 4' roof bolt pattern. We do have some water in the mine and the coal seam is 7 foot high.

The main fan is a blowing fan, it is currently on and it is guarded. The main fan is non-reversible, it cannot be turned off and cannot be stalled.

The main power is locked out and it is guarded.

We have a 6' ventilation shaft near the face of the #1 entry. We have occasionally used it as an exhaust shaft.

Guards are posted at all mine portals. All federal, state, local, union and company officials have been notified. We have a competent lifeline person to receive and give signals. The mine map is up to date. Back up mine rescue teams are also available.

Permanent stoppings cannot be moved.

Written instructions and maps will be provided to you when you are ready to work and after you start the clock.

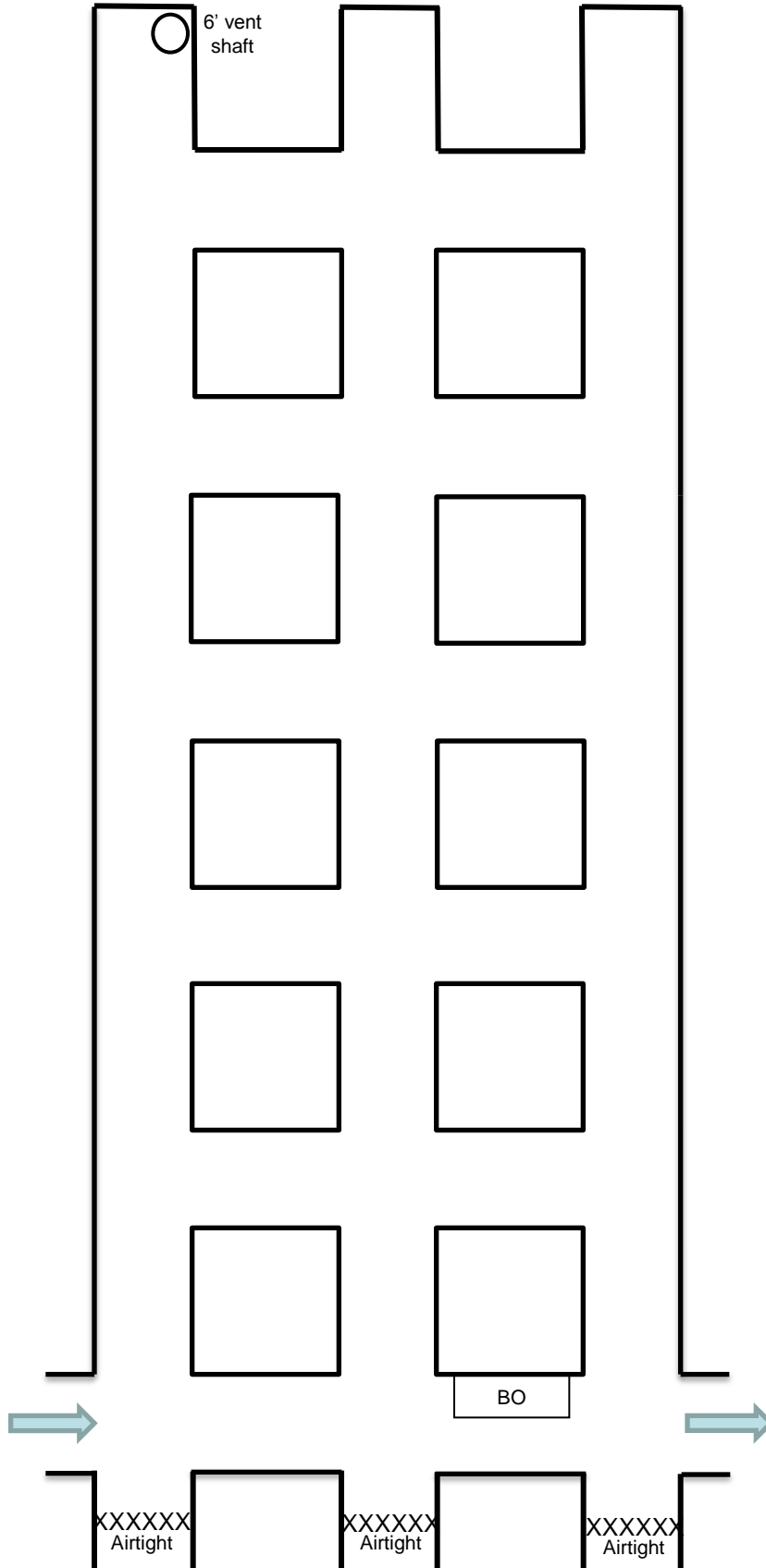
PROBLEM

- When any team member is in by the FAB, no team member may ever travel more than 25' from the captain's or the No.5 team member's original stopping point.
- There is a 60 minute time limit to this problem.

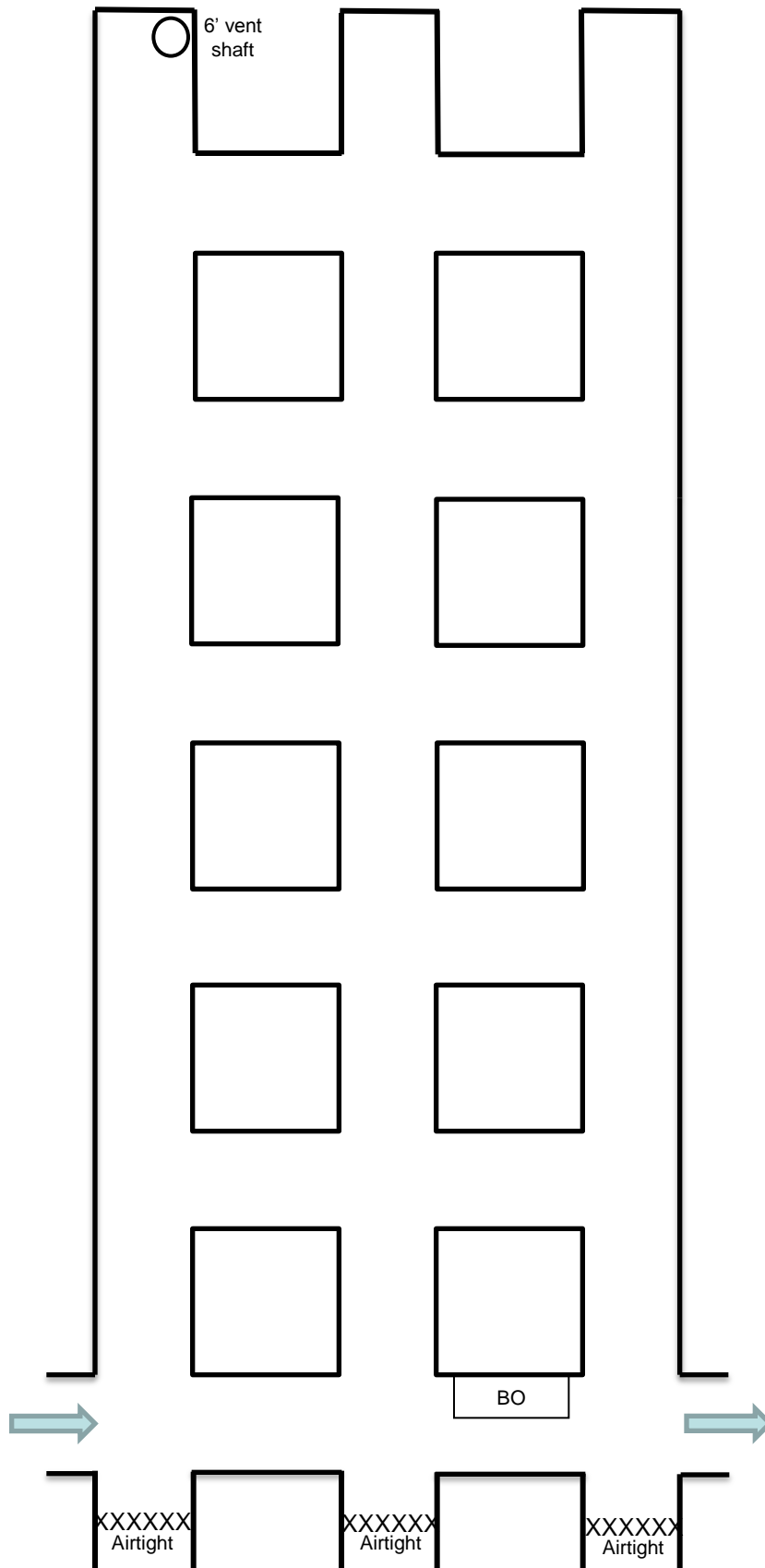
- Account for all missing persons
- Bring all survivors to the fresh air base
- Explore all accessible areas of the mine that can be safely examined.

GOOD LUCK !

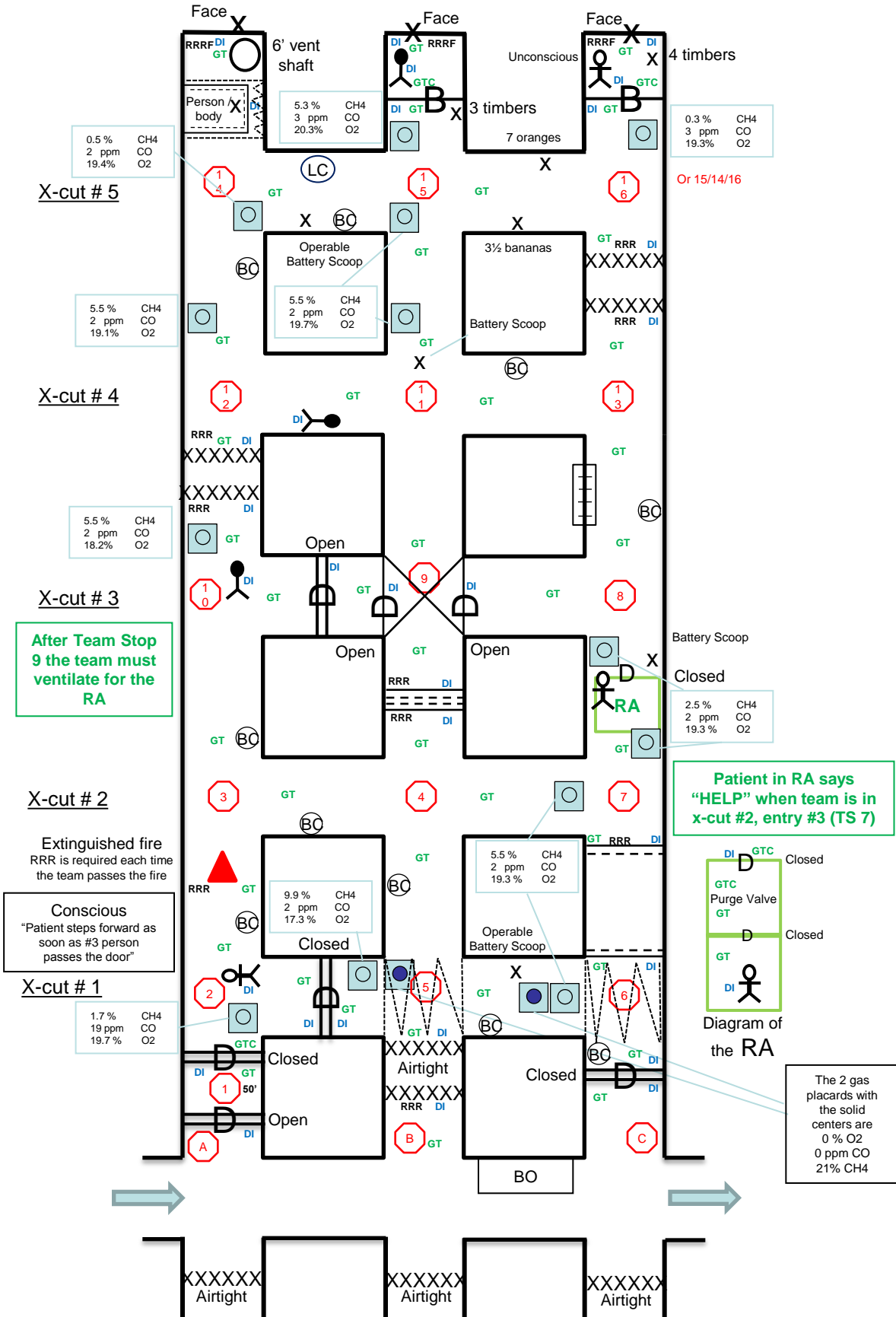
Team Map



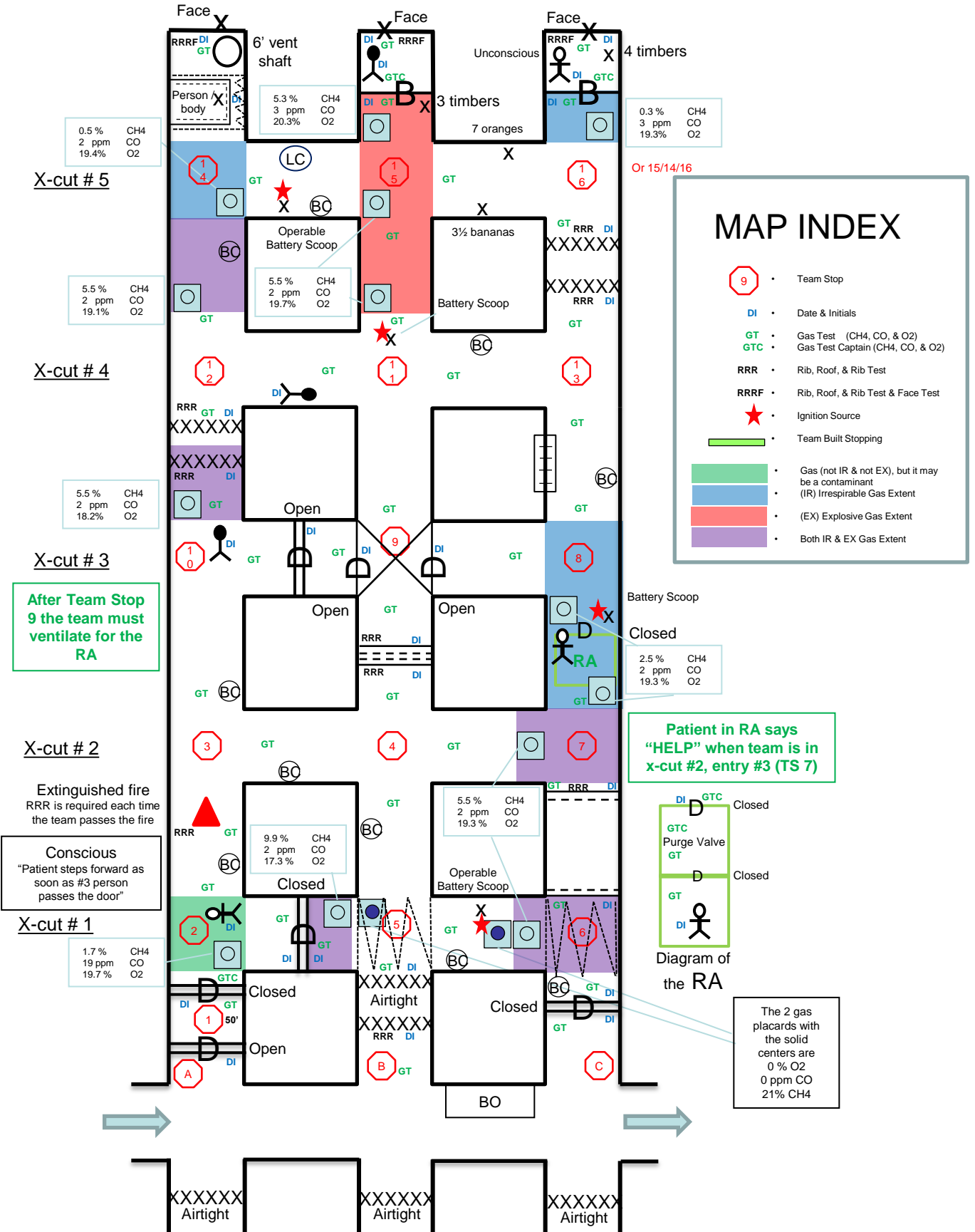
Briefing Officers Map



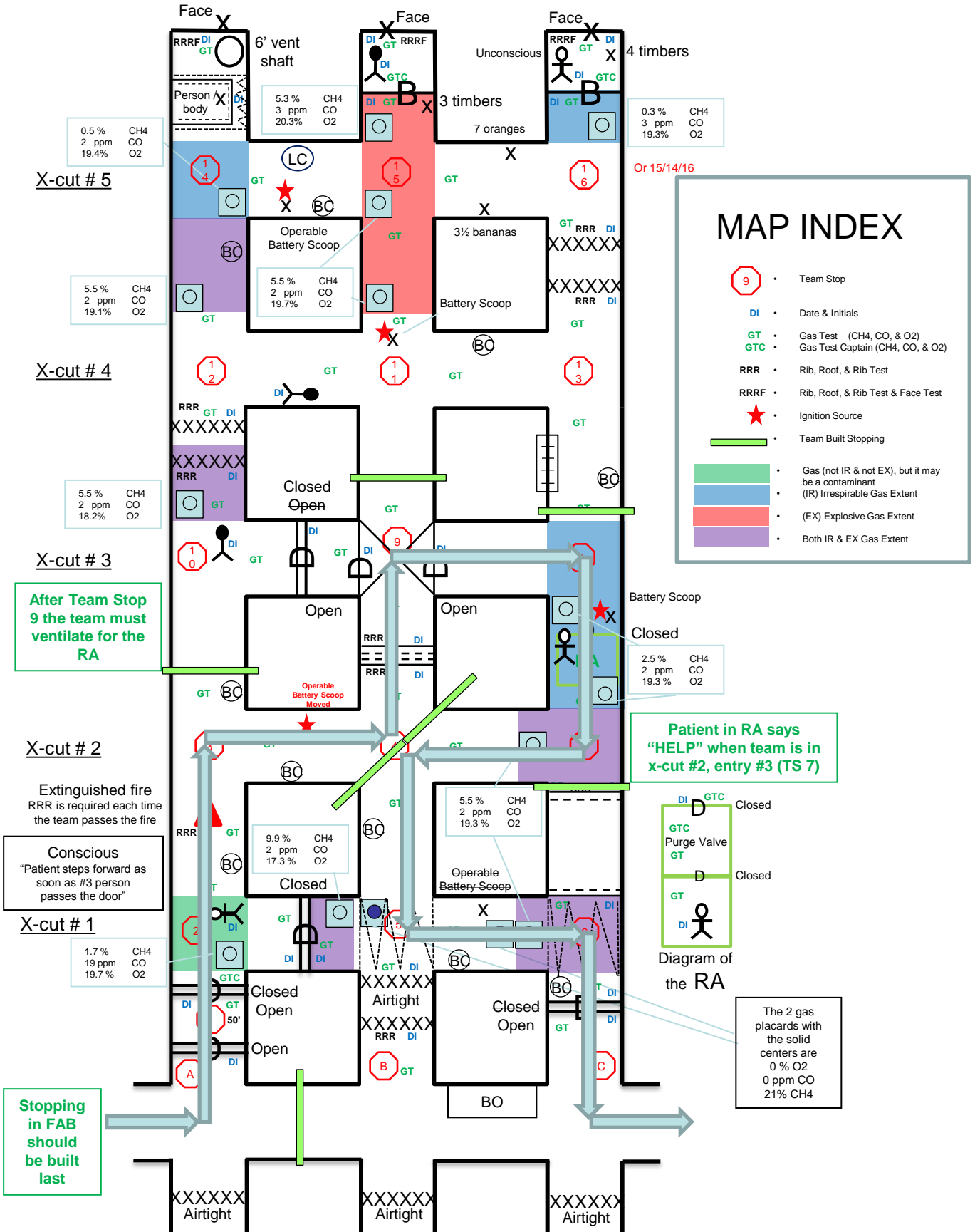
Judges Map



Gas Extents



1st Ventilation



MAP INDEX

- 9 • Team Stop
- DI • Date & Initials
- GT • Gas Test (CH4, CO, & O2)
- GTC • Gas Test Captain (CH4, CO, & O2)
- RRR • Rib, Roof, & Rib Test
- RRRF • Rib, Roof, & Rib Test & Face Test
- ★ • Ignition Source
- Team Built Stopping
- Gas (not IR & not EX), but it may be a contaminant (IR) Irrespirable Gas Extent
- (EX) Explosive Gas Extent
- Both IR & EX Gas Extent

X-cut # 5

0.5 % CH4
2 ppm CO
19.4 % O2

5.3 % CH4
3 ppm CO
20.3 % O2

0.3 % CH4
3 ppm CO
19.3 % O2

X-cut # 4

5.5 % CH4
2 ppm CO
19.1 % O2

X-cut # 3

5.5 % CH4
2 ppm CO
18.2 % O2

After Team Stop 9 the team must ventilate for the RA

X-cut # 2

Extinguished fire
RRR is required each time the team passes the fire

Conscious
"Patient steps forward as soon as #3 person passes the door"

X-cut # 1

1.7 % CH4
19 ppm CO
19.7 % O2

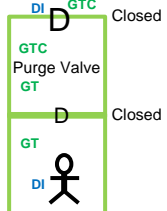
Stopping in FAB should be built last

Battery Scoop

Closed

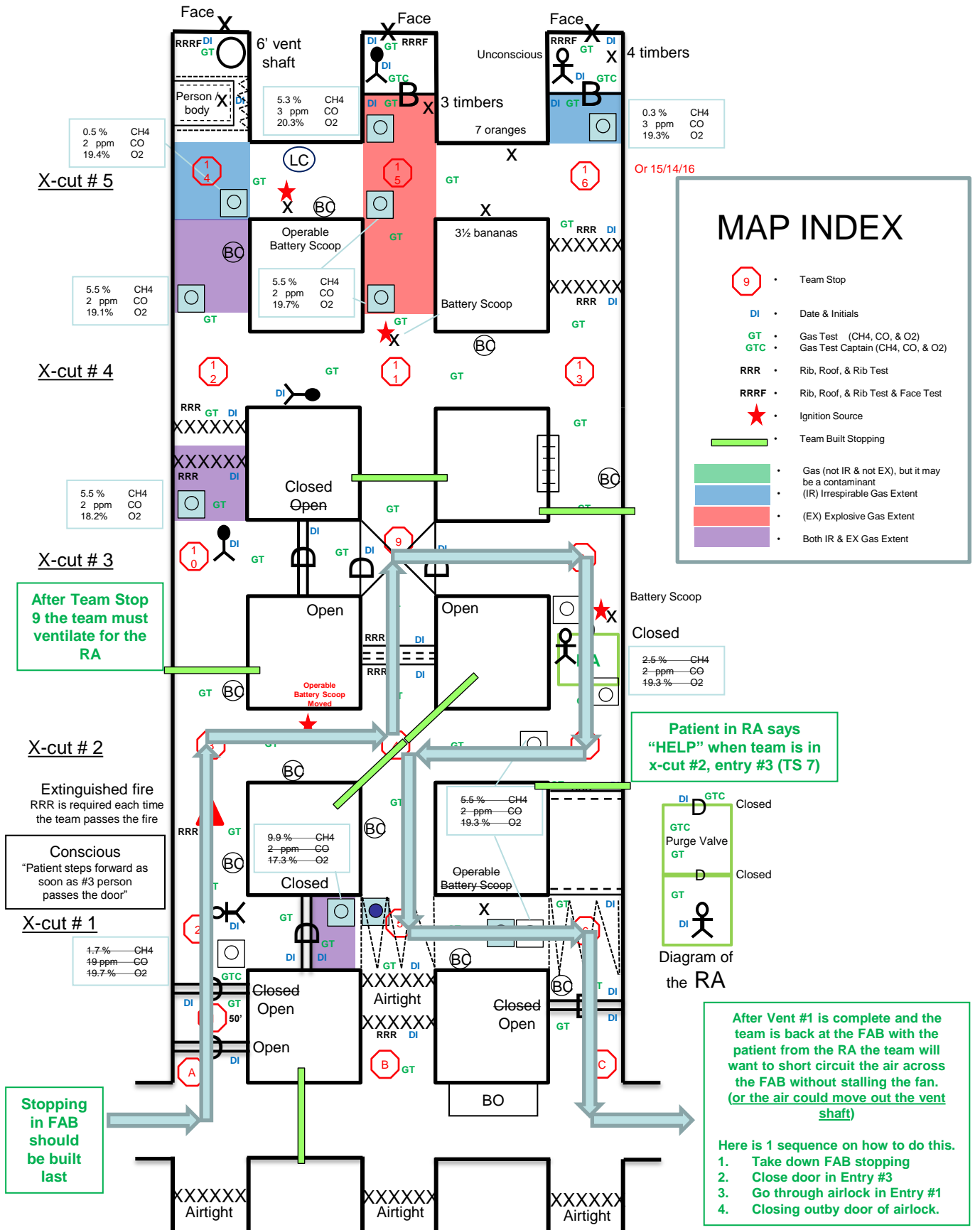
2.5 % CH4
2 ppm CO
19.3 % O2

Patient in RA says "HELP" when team is in x-cut #2, entry #3 (TS 7)



The 2 gas placards with the solid centers are
0 % O2
0 ppm CO
21% CH4

1st Ventilation (gases cleared)

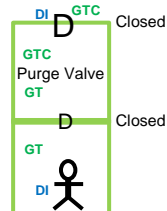


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Battery Scoop
Closed
2.5% CH4
2 ppm CO
19.3% O2

Patient in RA says "HELP" when team is in x-cut #2, entry #3 (TS 7)



After Vent #1 is complete and the team is back at the FAB with the patient from the RA the team will want to short circuit the air across the FAB without stalling the fan. (or the air could move out the vent shaft)

Here is 1 sequence on how to do this.

1. Take down FAB stopping
2. Close door in Entry #3
3. Go through airlock in Entry #1
4. Closing outby door of airlock.

After Team Stop 9 the team must ventilate for the RA

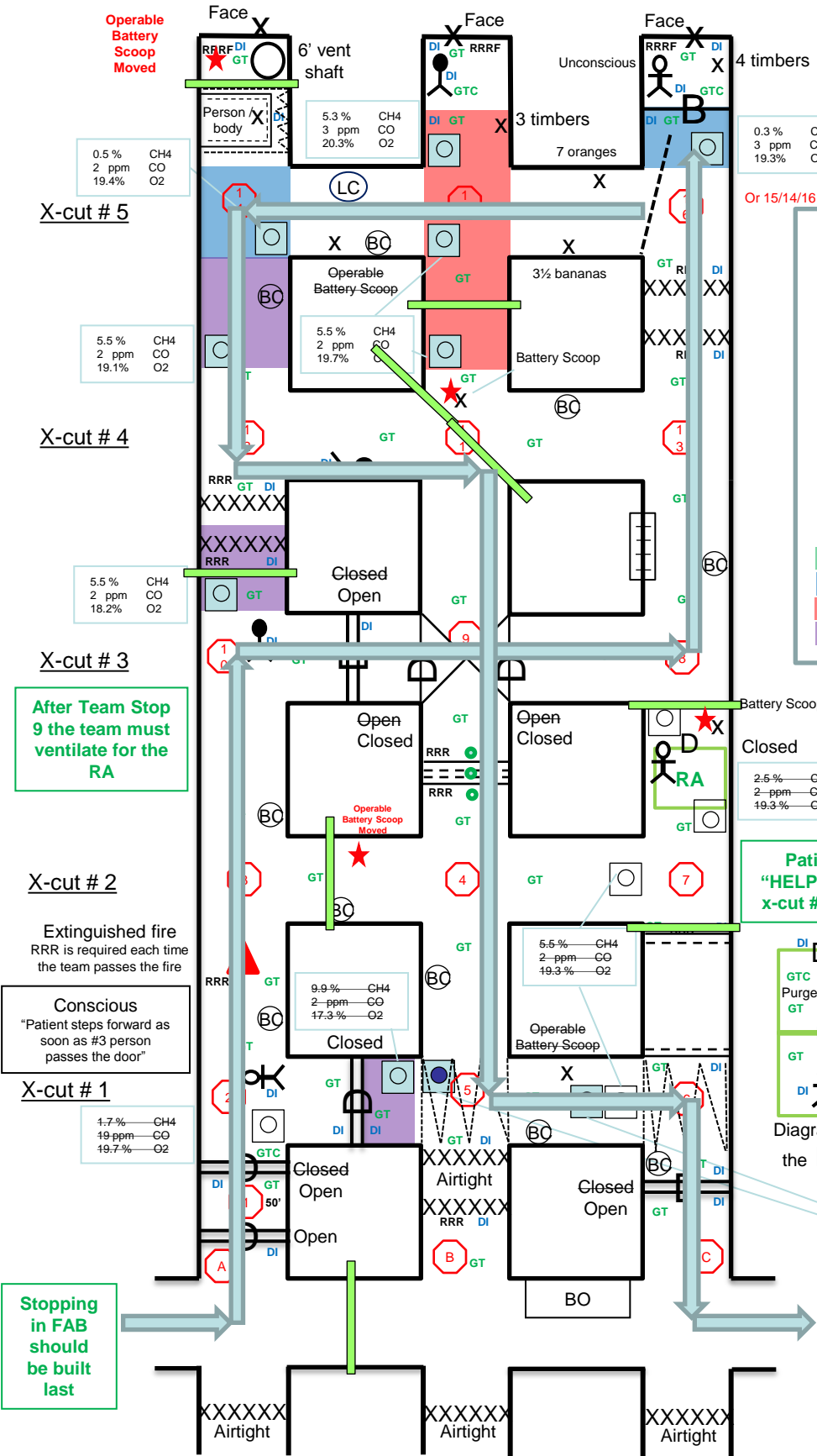
Extinguished fire
RRR is required each time the team passes the fire

Conscious
"Patient steps forward as soon as #3 person passes the door"

Stopping in FAB should be built last

2nd Ventilation

No ventilation changes are required to enter the Barricade in entry #2. An airlock however is required.



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X-cut # 5

X-cut # 4

X-cut # 3

X-cut # 2

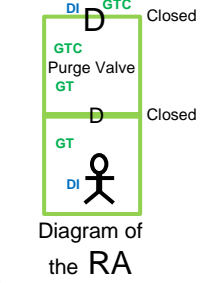
X-cut # 1

After Team Stop 9 the team must ventilate for the RA

Patient in RA says "HELP" when team is in x-cut #2, entry #3 (TS 7)

Conscious "Patient steps forward as soon as #3 person passes the door"

Stopping in FAB should be built last



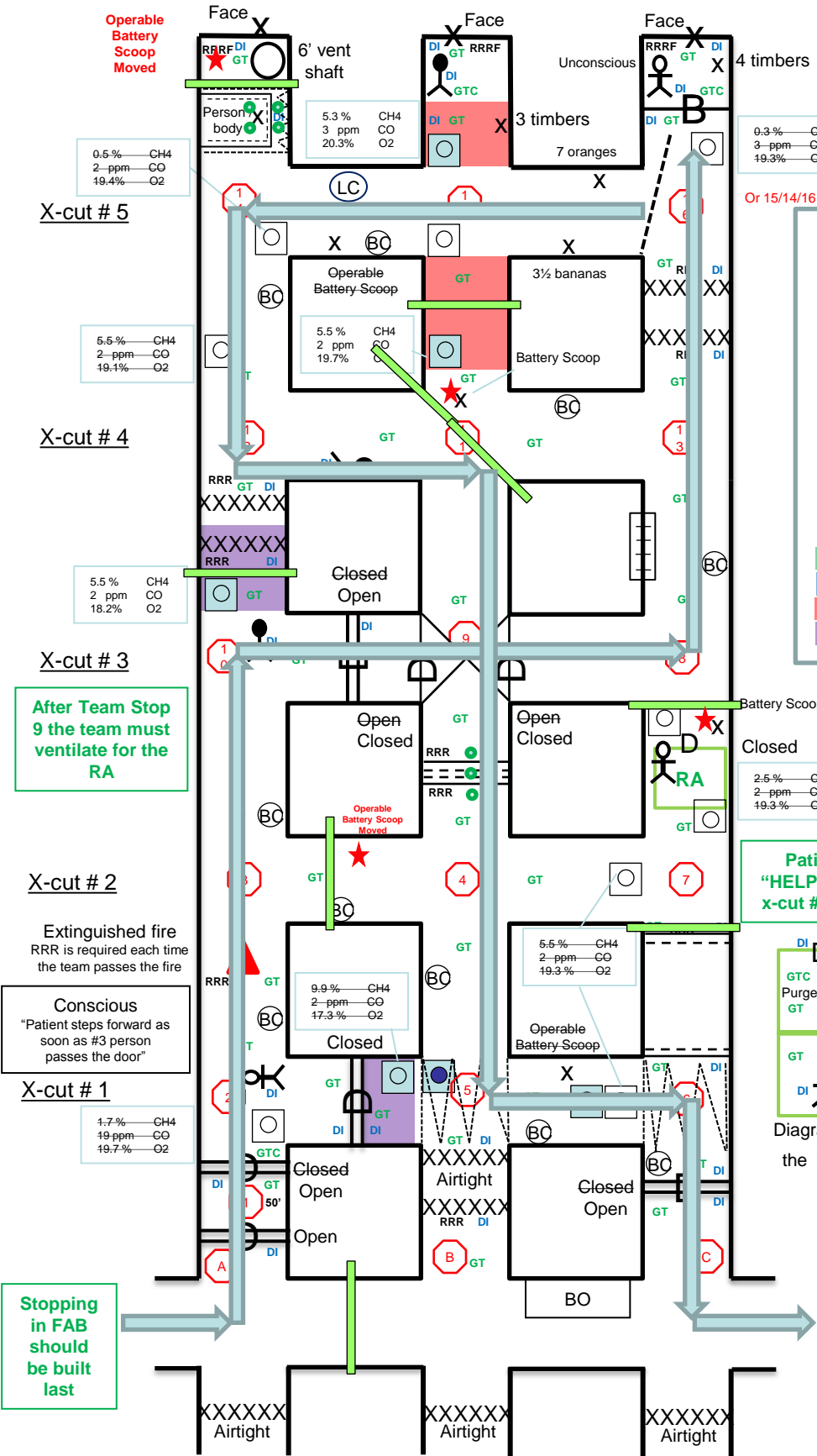
The 2 gas placards with the solid centers are
 0 % O2
 0 ppm CO
 21% CH4

Extinguished fire RRR is required each time the team passes the fire

Stopping in FAB should be built last

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X-cut # 1

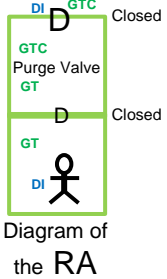
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Patient in RA says "HELP" when team is in x-cut #2, entry #3 (TS 7)

Extinguished fire RRR is required each time the team passes the fire

Conscious "Patient steps forward as soon as #3 person passes the door"

Stopping in FAB should be built last



After Ventilation #2 is completed and the gas is cleared in front of the Barricade in #3 entry the team must now airlock into the Barricade. Here they will also find 4 timbers to use to timber into the unsafe roof near the face of #1 entry

0.5% CH4
2-ppm CO
19.4% O2

5.5% CH4
2-ppm CO
19.1% O2

5.5% CH4
2-ppm CO
18.2% O2

9.9% CH4
2-ppm CO
17.3% O2

1.7% CH4
19-ppm CO
19.7% O2

0.3% CH4
3-ppm CO
19.3% O2

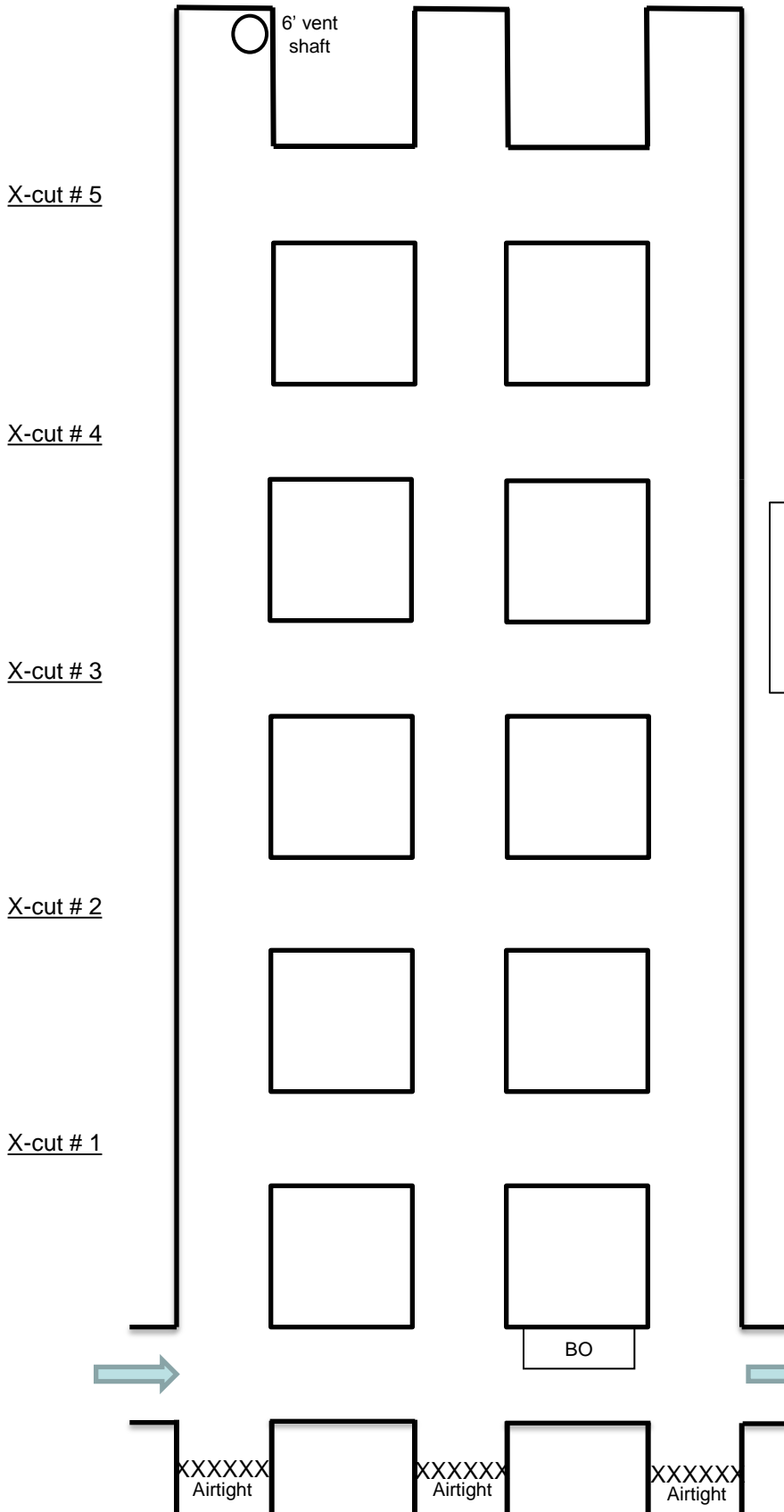
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19.3% O2

Final Vent Map



The following changes need to be noted on the team map to indicate the conditions left in the mine and the fresh-air base:

- changes to ventilation structures (i.e. stoppings, doors, etc.)
- victims removed from the mine
- electrical circuits energized or de-energized
- fires extinguished
- ignition sources relocated
- water pumped
- roof supports installed

and in the areas reentered by team

- smoke cleared
- gases removed
- permanent changes in direction of ventilation

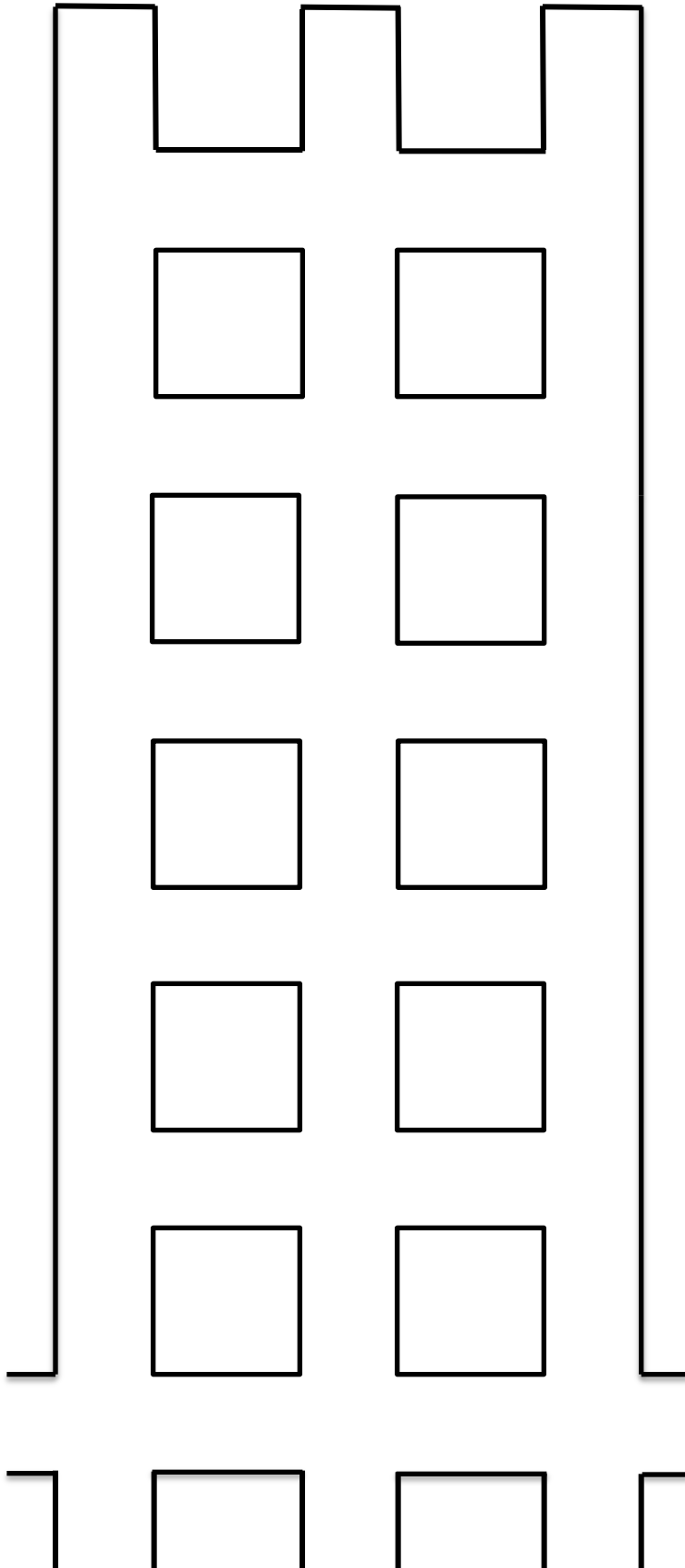
Any terminology which describes these changes is acceptable.

Judge Signature _____

Captain Signature _____

Team # _____

Delta 2012 Basic Mine Layout



- All entries and x-cuts are 10 ft wide
- All pillars are 15 ft x 15 ft
- The faces are in 15 ft