

PA Bituminous Safety Association
Mine Rescue Problem

August 20, 2019

Statement

Past Events

In the winter 2018, The Indy-Cy-Sieve Mining Company opened this mine. The Pokenhope mine is made of up of one section. It is currently mining underneath an older mine that is reportedly filled with water. The mine has had water trouble since it was first opened. It was opened November 7, 2018 and the mined approximately 4 crosscuts before they lost power and the mine was flooded with water. They made numerous attempts to continue mining but were unable to keep up with water pumping in the mine. The mine was closed down while new plans and approvals were completed. The company tried in the spring of 2019 to resume production but was still unable to keep the water down. They decided to wait until July-August to once again try to resume production in the mine. Two weeks ago the water was pumped down and they resumed production. Late last week heavy rains hit the area and flooded the mine. This morning a pump crew was headed in to pump the remaining water out of the mine to resume production later this week.

Current Timeline

August 21 06:00 – The three-man crew entered the mine to pump water and prepare for resuming mining operations

August 21 08:00 – The crew called out to request a backup pump

August 21 09:00 – One of the crew traveled outside to transport the back-up pump into the section.

August 21 10:30 – The section foreman called to say the water was not pumping away

August 21 11:00 – The section foreman called out to say that the sump in the section was full and they needed to pump to the surface directly

August 21 11:14 – The outside guy checked on the outside pond and verified there was enough room to pump directly outside

August 21 14:30 – Sever thunderstorm arrives with a substantial loss in atmospheric pressure.

August 21 14:35 – Main power is lost on the mine.

August 21 14:36 – Radio/Phone communication with the section foreman is lost

August 21 14:37 – Mine fan is down.

August 21 15:00 – Crew never arrives outside

August 21 15:15 – Air reading at the mine entrance shows Oxygen levels less than 18%

August 21 16:00 – State and Federal Officials are on site.

August 21 17:00 – Mine Rescue Teams are on site.

August 21 17:30 – Mine Rescue Teams are given the go ahead to start exploration.

Problem

Locate the missing 3 miners and bring survivors to the fresh air base.

We have approved plans to pump any water found or breech seals if necessary. There is a permissible pump, cable and pump line in a supply cart in-by the FAB

The blowing mine fan cannot be stalled nor stopped once it is **started**.

The power center at the FAB is energized.

Once the sump in the section is roofed you are no longer able to pump into the sump.

Remove all contaminants from the mine for barefaced exploration

Keys to the Problem

Team Stop 1/2 – Verify the team remembered the team check at the first team stop in by the fresh air base (Rule 28). The team has the choice of making entry 2 or entry 3 to crosscut B. If they perform team stop number 1 out by the diagonal temporary stopping and breach the temporary stopping prior to exploring in by the stopping they must airlock, with a temporary out by in entry 3 and a temporary stopping at the edge of the water of the sump. If the team performs a team stop out by the diagonal stopping in the intersection and finds temporary stopping placard then they have found the extent of the gas and they may explore in entry 1 or 2 until crosscut C. **Team stop 4** must be in entry 2 crosscut C, Since the gas placard is on the edge of the water over knee deep in entry 3.

Team Stop 5 – The team must turn to the right and explore the in by side of the water over knee deep to find the extent of the gas that was located in the water over knee deep; prior to exploring towards **Team Stop 6**

Team Stop 7/8 – The team must explore in either entry 2 or 3 when heading into crosscut D, because the gas placard in entry 3 extends gas up into crosscut D. After team has explored **Team Stop 7/8**; they will know enough at this point to safely ventilate the barricade in entry 3. This must be done prior to exploring to **Team stop 10**. **Team stop 9** is shown inside the barricade as a team move, rescuing the victim prior to heading to **Team stop 10**

Team Stop 10 – The team should airlock and enter the barricade **Team Stop 11** at this stop, they are required to airlock due to the unknown air constituents on the other side. The team does not have to airlock on the way out because the water is roofed.

After Team Stop 11 they team has explored all they can get to without pumping any water. At this time, they have enough water line to reach the sump but not the surface discharge point. Once the team has pumped the over knee-deep water into the sump. Flip the Over knee-deep placards over. The placards should be blank in the entry of 3 but on the reverse side of the Sump “Water over knee Deep”, there should be a water roofed placard. Please make sure prior to bringing the team onto the field that the placard says over knee deep in the sump and not roofed. Once the sump is full the team is no longer able to pump into it. When the team has pumped entry 3 into the sump and you flip the sump placard to full, then inform the BO that the waterline has arrived at the FAB. This will now let the team reach the water from the face of #1 entry. Although there isn’t enough water line to reach from the face to the discharge point, there is enough water line to reach from the sump to the face. Make sure the team has removed the explosive mixture out by the water roofed in entry 1. (Ventilation 3)

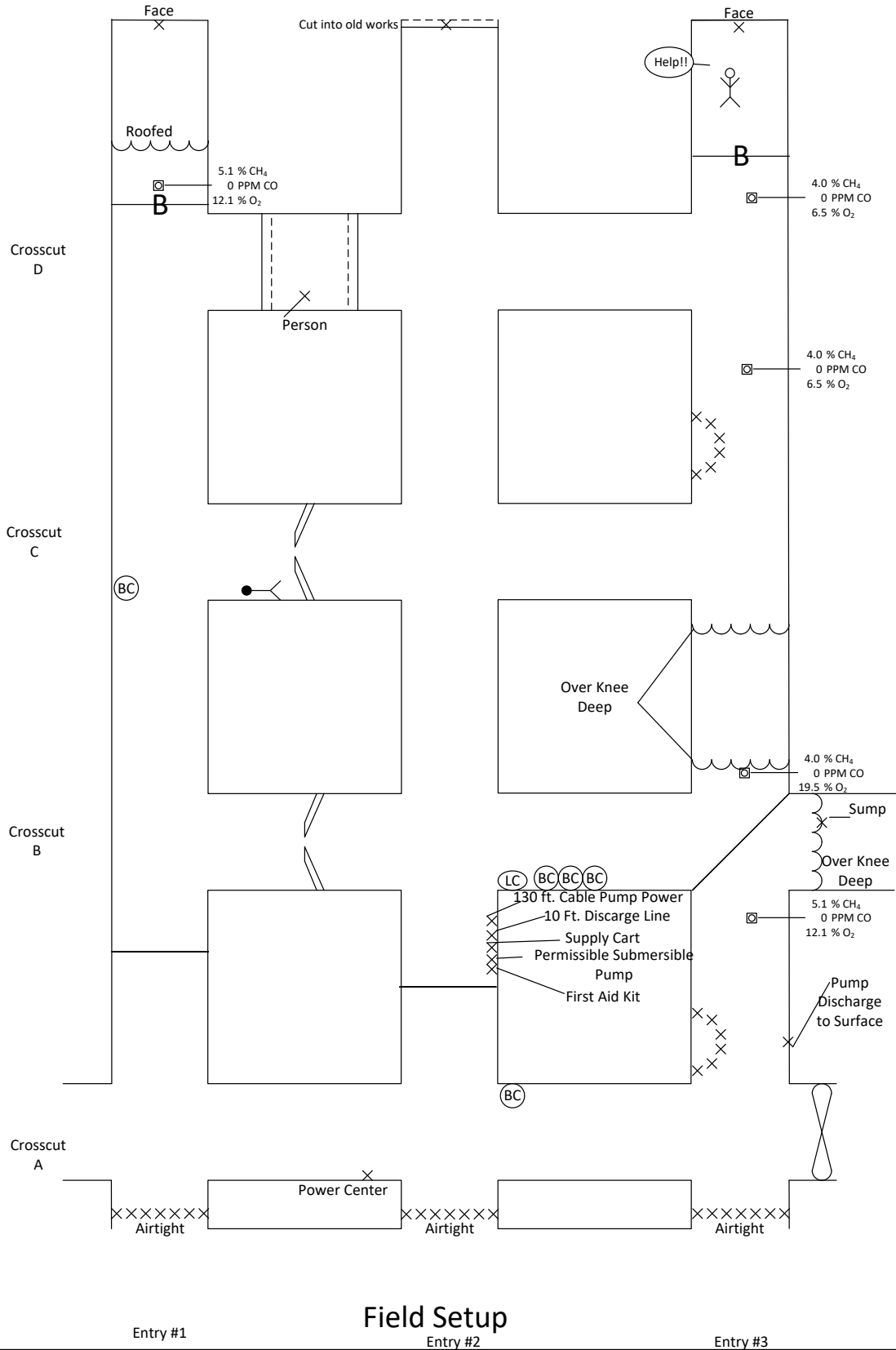
The team will probably have to retreat out to the sump, to pump the sump to the discharge point and then return to the face to pump the water. Once the team has pumped the water in entry 1 at the face flip to water roofed placard over and note that it says face. Place on the painted dot in the face of entry #1.

Once the water has been cleared and all the contaminants have been cleared there is nothing else to do but shut the clock off. The team will see the person lying in the unsafe roof but cannot get to him nor should they map him. If the team fails to pump the water, they should be discounted under Rule 44. If the team fails to remove all the contaminants for the mine they should be discounted under rule 50 as well. Two separate discounts for failing to pump the water and remove all the contaminants.

** Please note: Team stops may be slightly different due to where and how they worked the diagonal barricade in entry 3 crosscut c. Please allow for a different number if the sequence stays the same. Any questions see the field supervisor during the working of the problem.

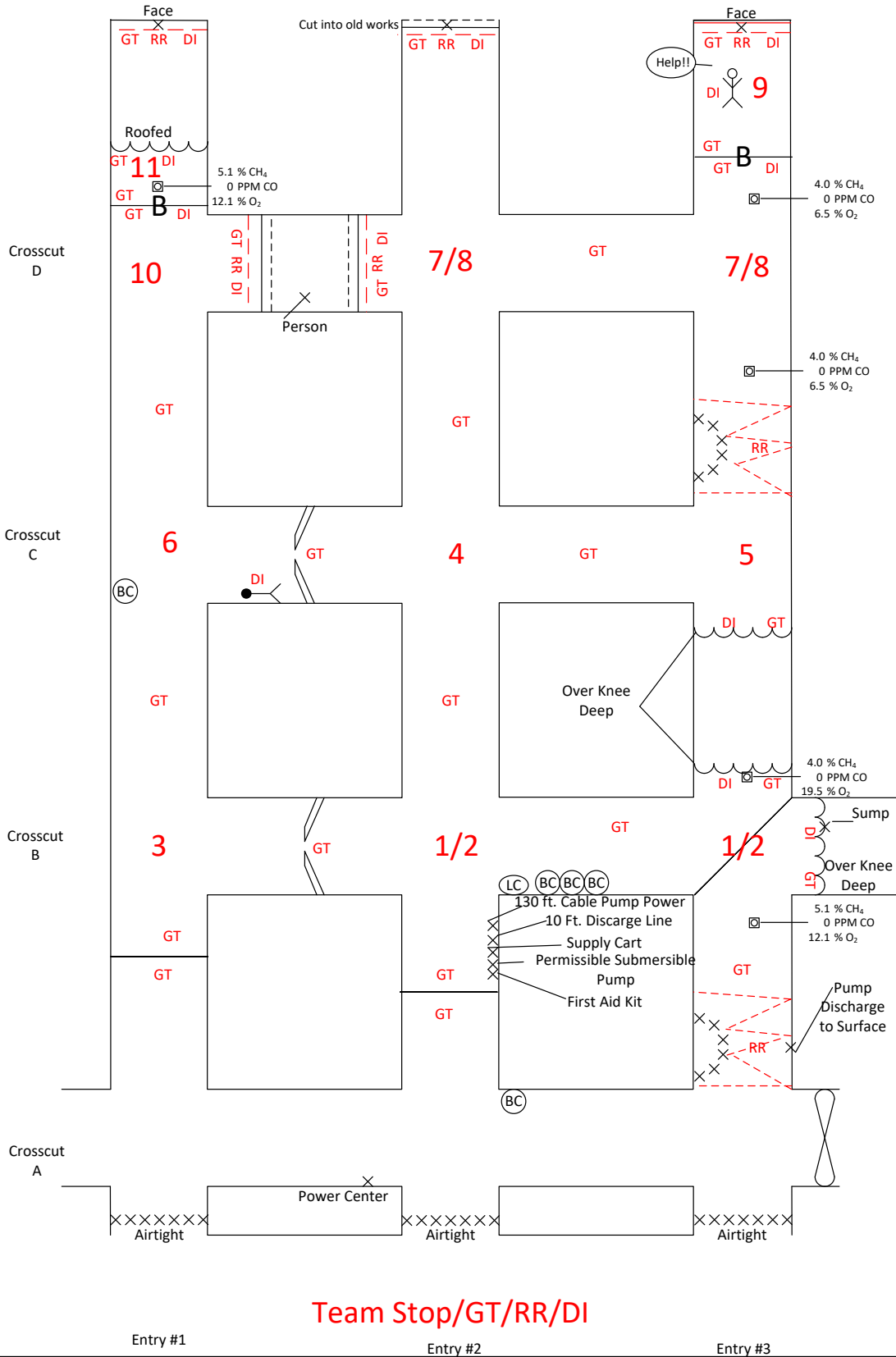
Field: _____

Team: _____



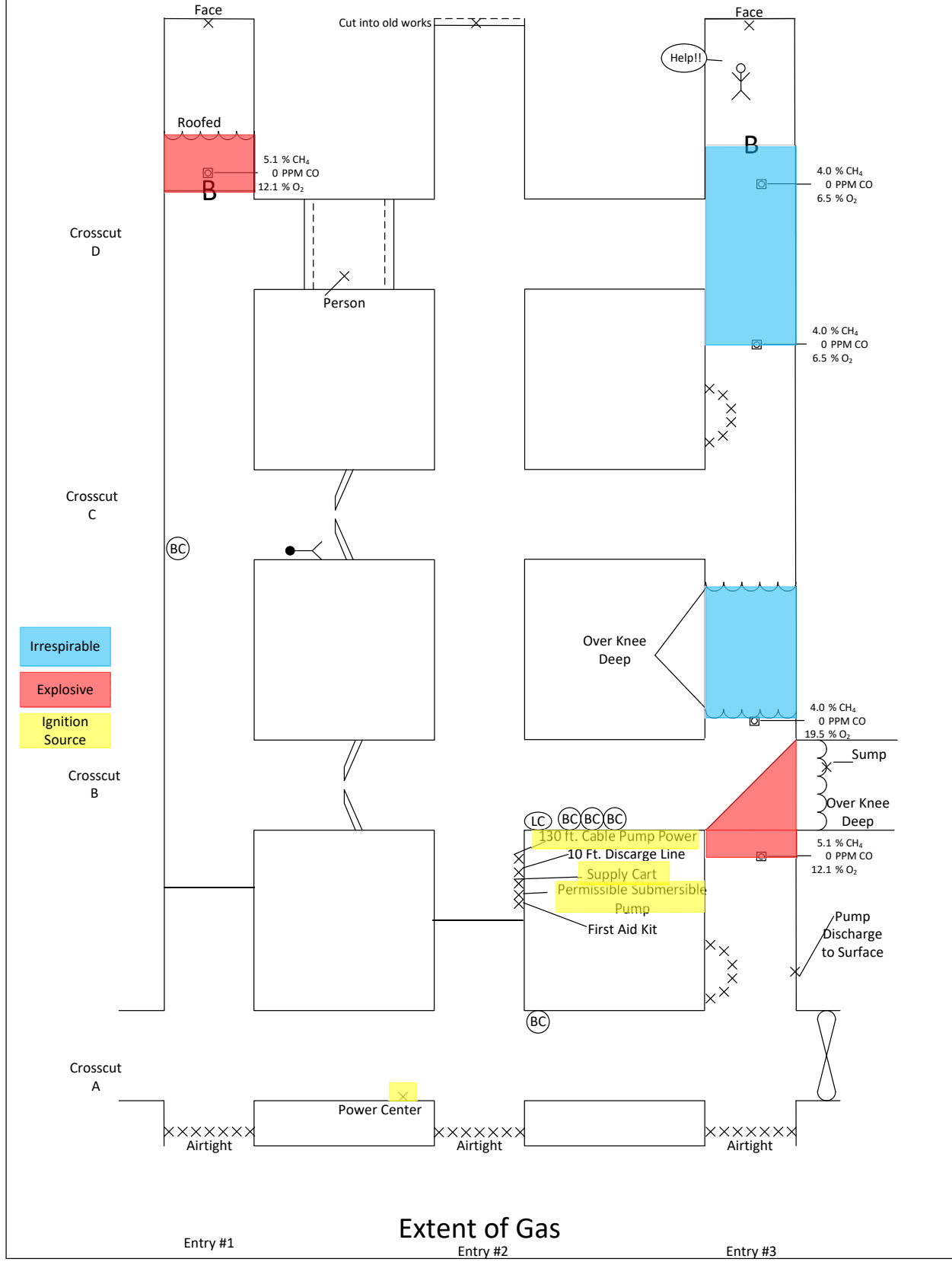
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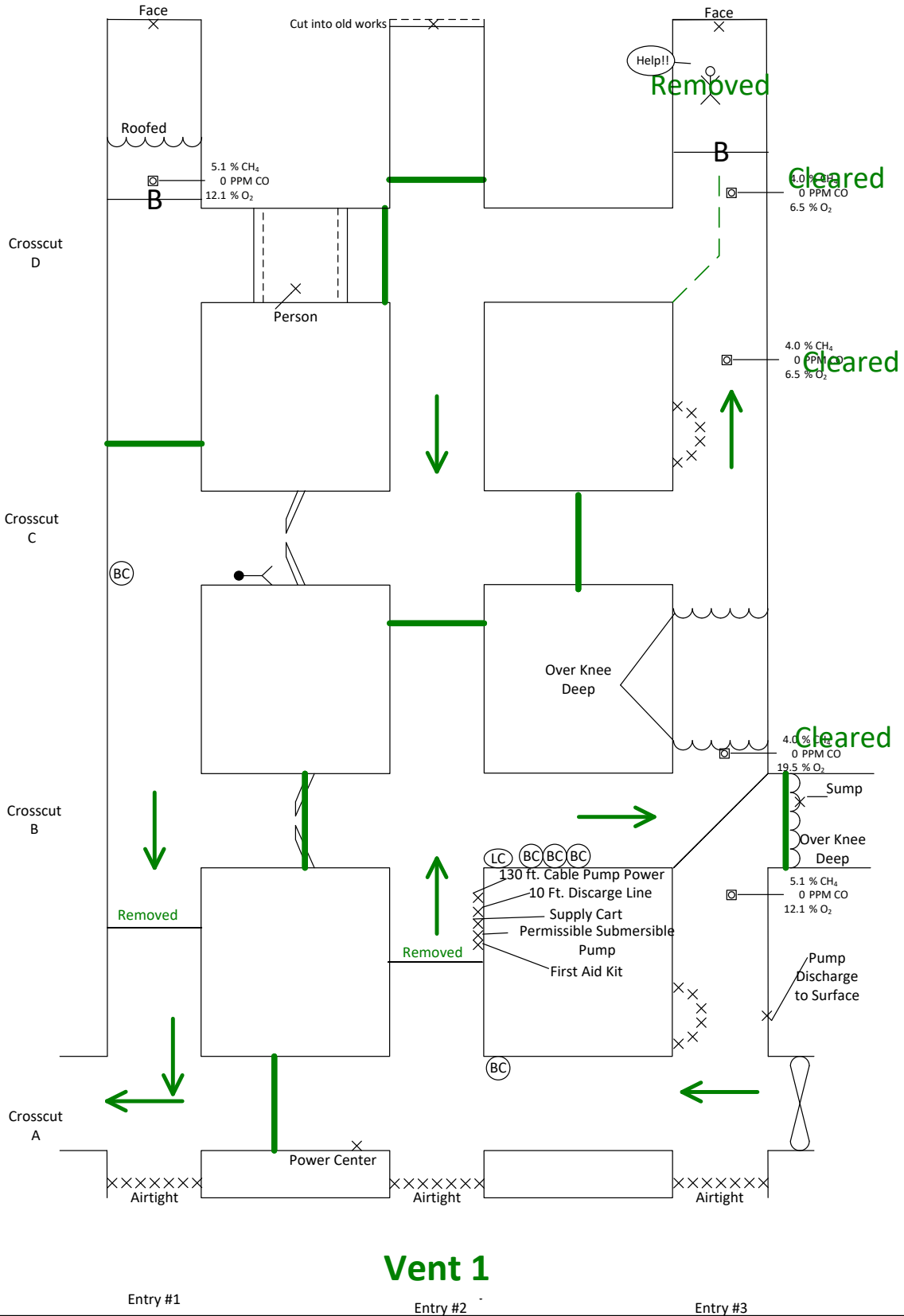
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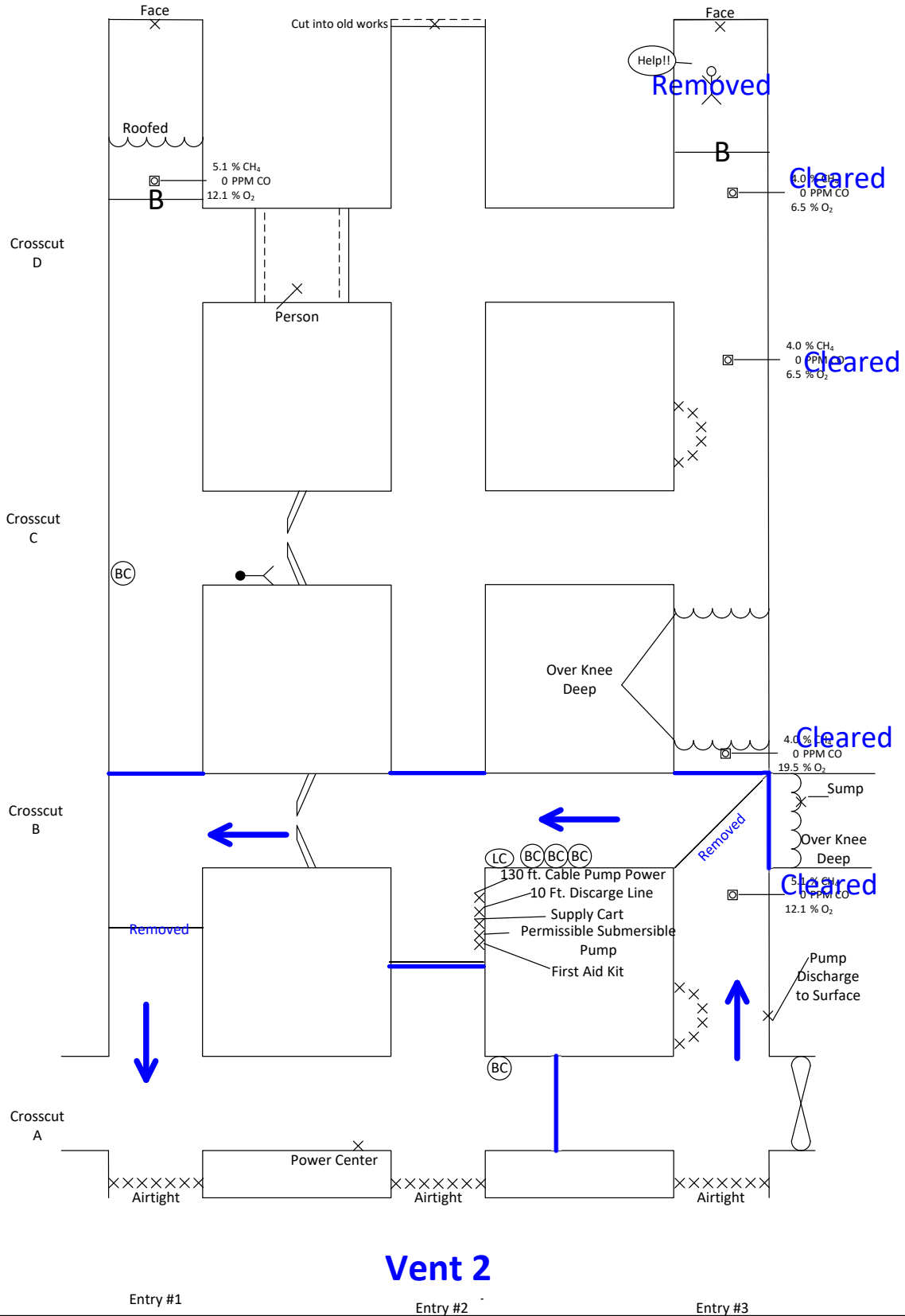
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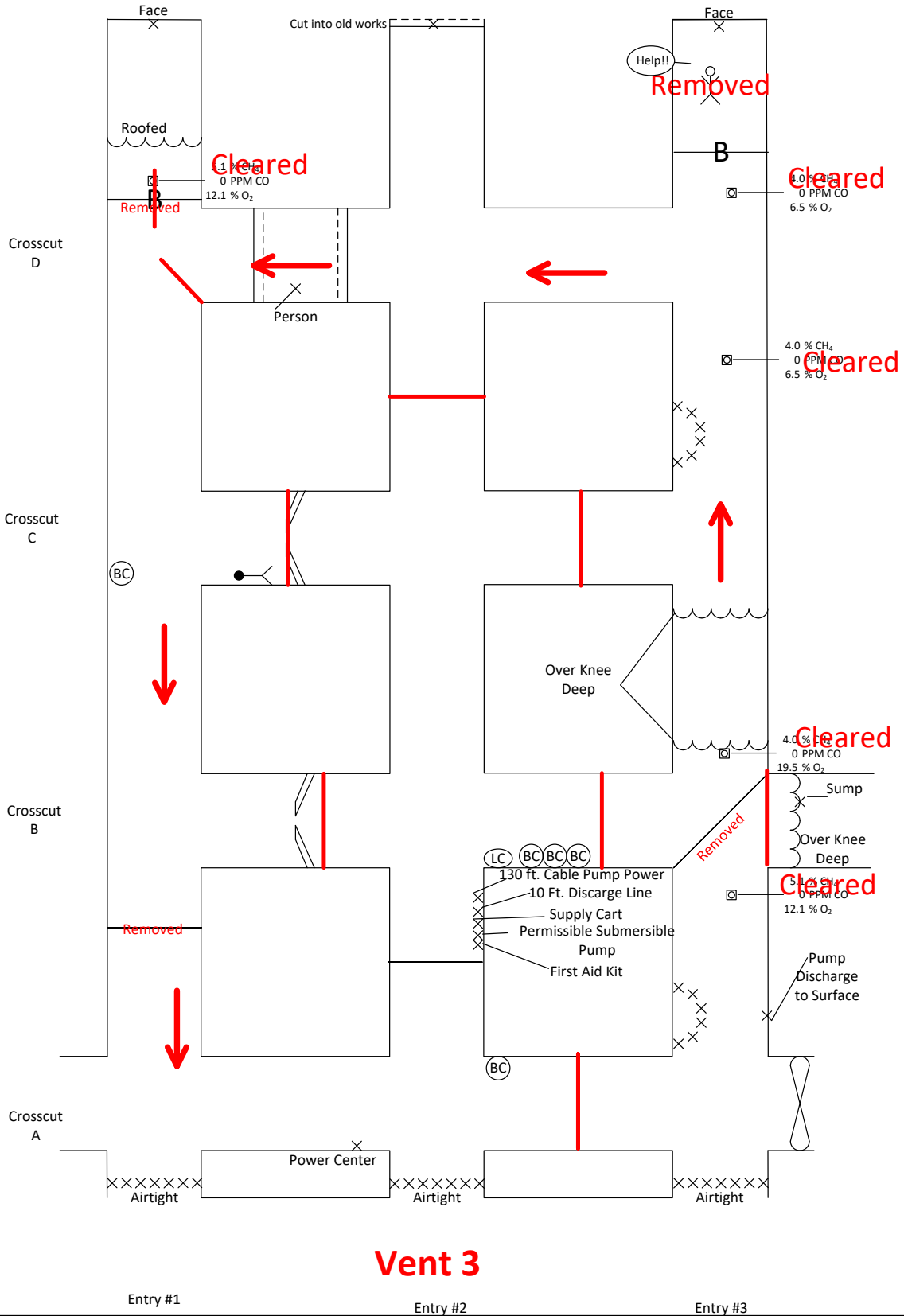
Field: _____

Team: _____



Field: _____

Team: _____



Field: _____

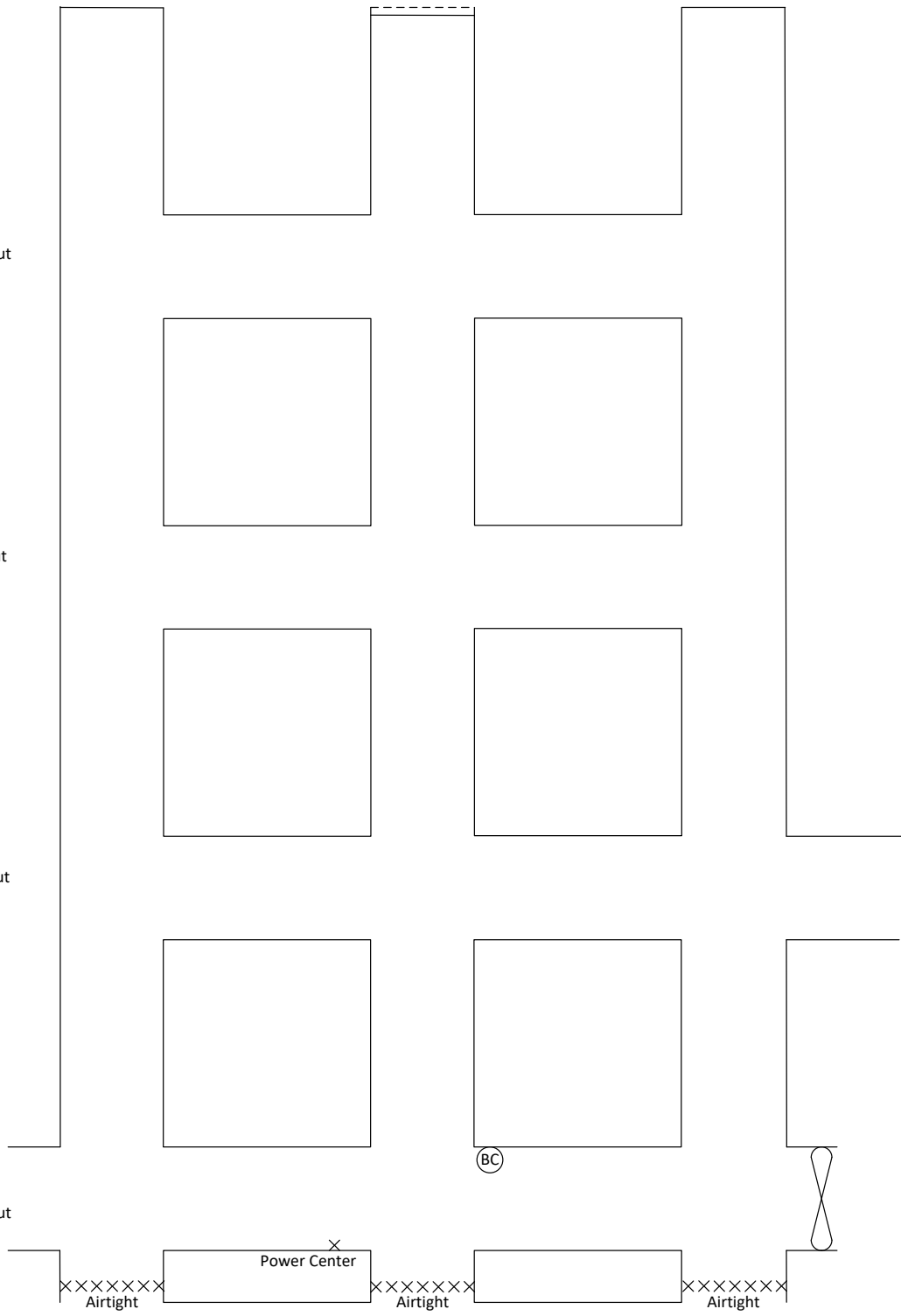
Team: _____

Crosscut
D

Crosscut
C

Crosscut
B

Crosscut
A



Entry #1

Entry #2

Entry #3

Field: _____

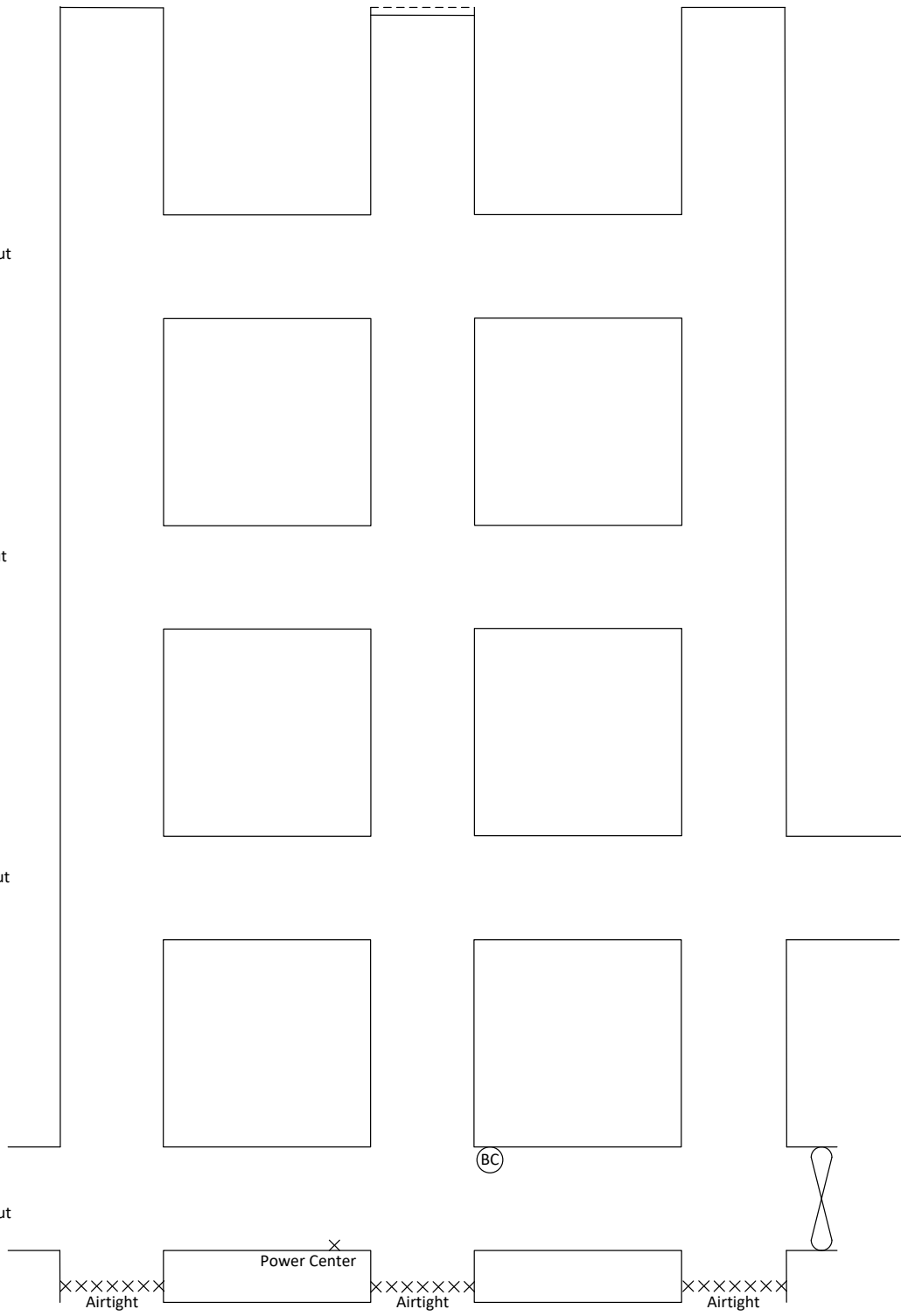
Team: _____

Crosscut
D

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Crosscut
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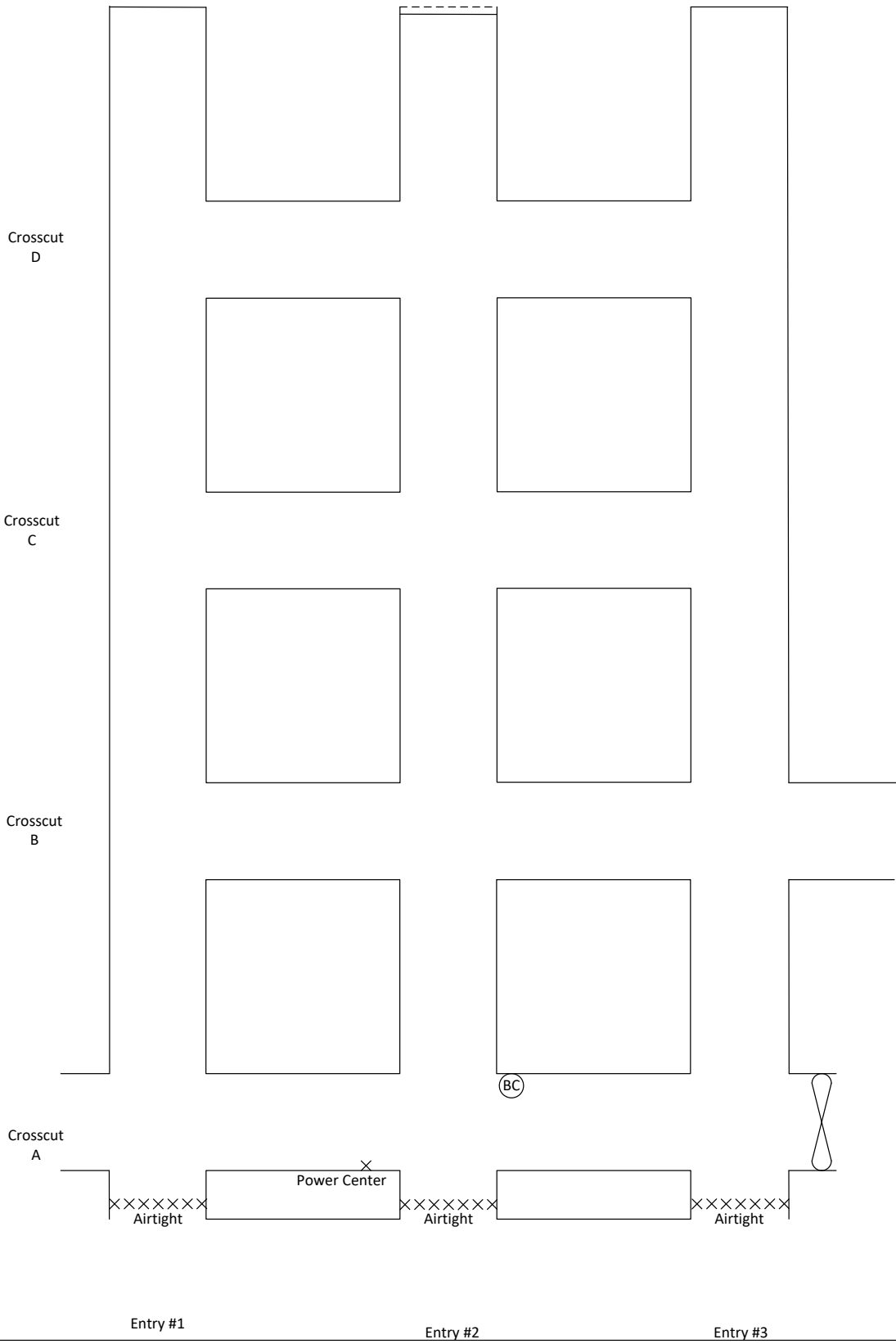
Entry #1

Entry #2

Entry #3

Field: _____

Team: _____



Field: _____

Team: _____

