

Annual State of Ohio Mine Safety Competition
October 1, 2009

STATEMENT

I am _____, Superintendent of the # 15 mine. We are glad that you are able to assist us with our emergency situation.

You are located at the fresh-air base in the 3 West section. The mine has been completely explored and made safe by other rescue teams up to this point. Arrows indicate the air is flowing across the fresh-air base from #1 entry to #3 entry. Number 1 entry is normally the intake and number 3 entry is normally the return.

On the midnight shift we had an eight man crew in the mine doing clean up, bolting and equipment maintenance at various locations throughout the mine. Two of the workers made it to the surface on their own. They indicated feeling a rush of air at the neck of the 3 West section. When they checked the return air they found low levels of oxygen and carbon monoxide. Two other miners were located by one of the other rescue teams and were also brought to the surface.

We believe an explosion has occurred in a connected abandoned mine, which has compromised our 3 West seals. Several years ago the 3 West section connected into the # 14 mine in an attempt to use an intake shaft in that mine to ventilate our mine. This intake shaft is located 5 crosscuts from where we holed in to the mine. Poor roof conditions and excessive water made it cost prohibitive to use the shaft, so we sealed the 3 West section and placed a concrete cap on the intake shaft. We have checked the #14 mine intake shaft and found the concrete cap is blown off.

The mine is walking height. Bolts are used to support the mine roof. We have encountered methane gas, water and adverse roof conditions. All electrical power coming into the mine is turned off and locked out. An exhausting fan on the surface ventilates the mine, it is not reversible. The fan must remain on at all times and cannot be stalled. The mine map is accurate and up to date as of three days ago.

Several mine rescue teams are present to serve as back ups while your work. When you are prepared to start you will be given two blank maps and your written instructions.

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PROBLEM

Account for all missing miners.

Bring all survivors to the fresh-air base.

Explore the entire mine, if it can be done safely.

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PATIENT STATEMENT

Help!

Get me out!

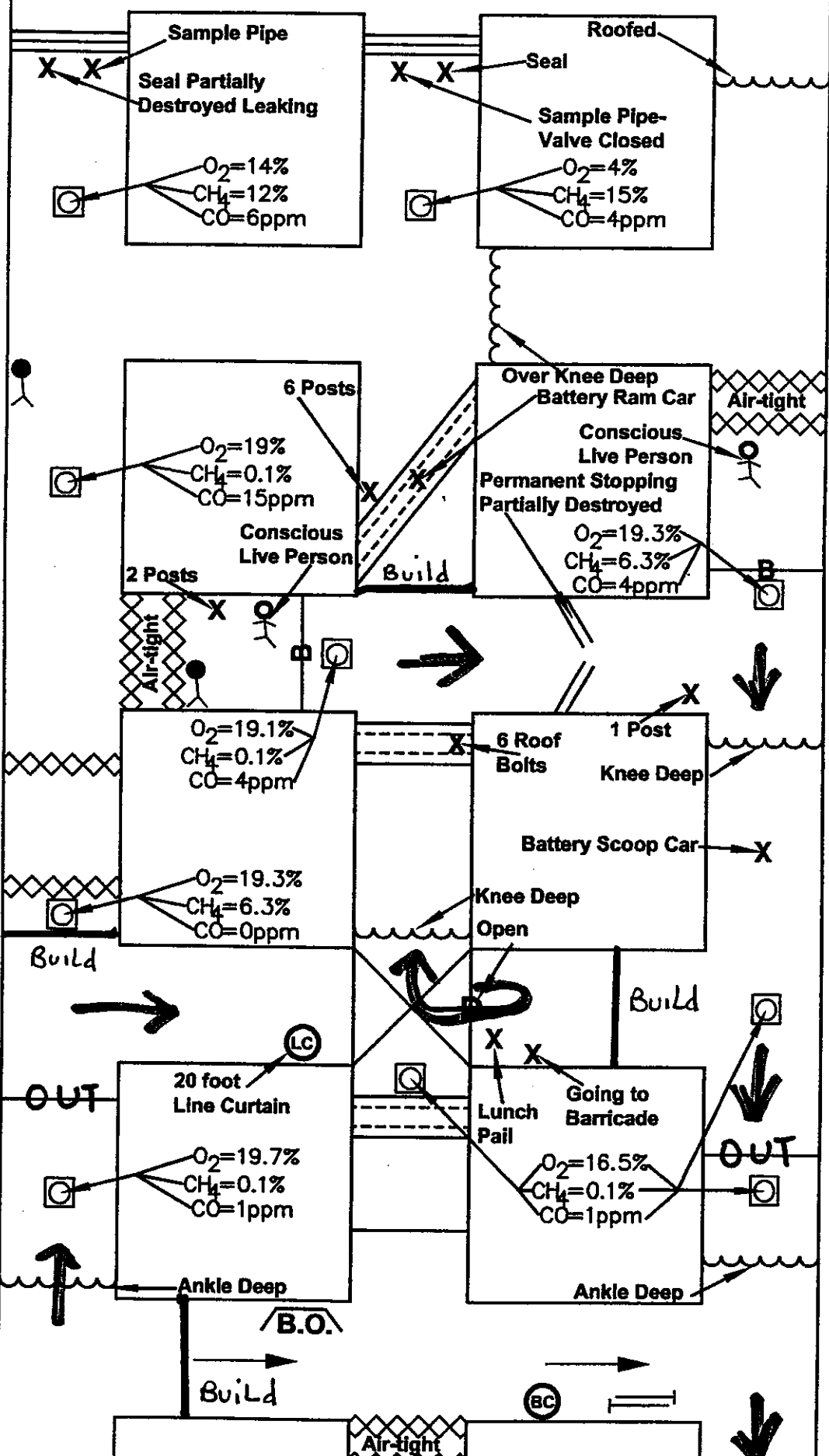
It is airtight all around me!

#1

#2

#3

FIRST VENTILATION

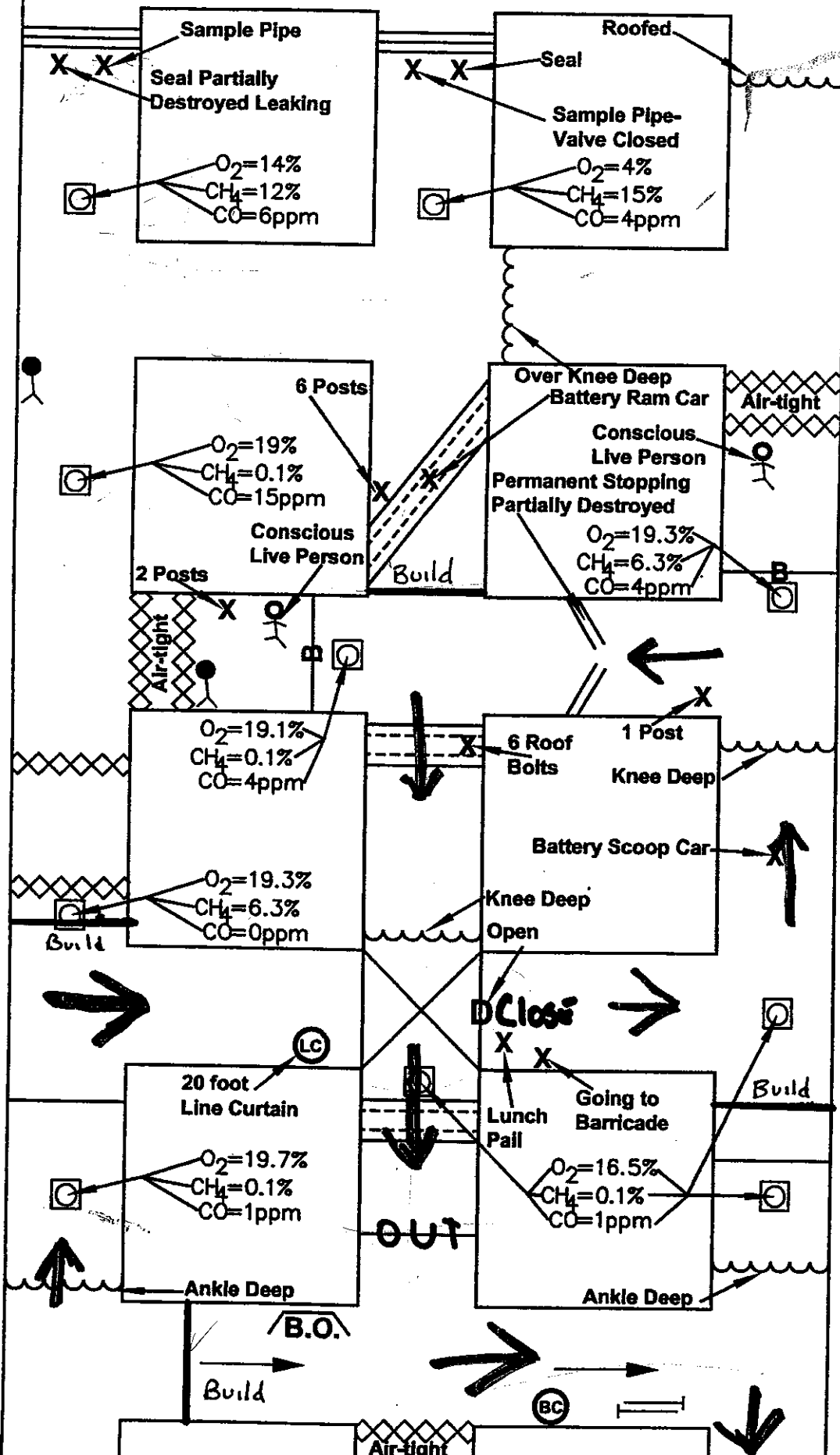


1

2

3

SECOND VENTILATION



SMOKE

PROBLEM IN

SIMULATED

MINE

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STATEMENT
IN-SMOKE

I am _____, Superintendent of the Cadiz Blue Mine. We are glad that you are able to assist us with our emergency situation.

You are located at the fresh-air base in the second left section of our mine. We have been mining three entries while going under a creek that has caused some adverse conditions. We plan to open back up to five entries but have not advanced far enough yet.

At the start of our day shift the mine foreman entered the mine to ensure it was safe, he called outside and indicated he had discovered a fire in the second left section. We have had no further contact with him. A rescue team ahead of you found the fire and extinguished it, but had to return to the surface because of apparatus problems.

Arrows indicate the air is flowing across the fresh-air base from #1 entry to #2 entry. #1 entry is normally the intake and #3 entry is normally the return, however in #3 entry the previous team discovered water roofed just outby this fresh air base. They built a stopping across #2 entry two crosscuts outby to direct the air outby in #2 and then back over to #3. You will receive a map of the ventilation outby the fresh air base.

The mine is walking height. Bolts are used to support the mine roof. We have encountered methane gas, extreme amounts of water and adverse roof conditions. All electrical power coming into the mine is turned off and locked out. The mine is ventilated by a blowing fan located at the drift opening.

Several mine rescue teams are present to serve as back ups while your work. When you are prepared to start you will be given two blank maps, a map of ventilation outby the fresh air base and your written instructions.

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PROBLEM
IN-SMOKE

Account for all missing miners.

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PATIENT STATEMENT
IN-SMOKE

Help!

Get me out!

It is airtight all around me!

