**Statement**

**I am \_\_\_\_\_\_\_\_\_\_\_\_\_\_, Superintendent of the Cell 1 mine. We had a crew of three (3) men working on our main advance section for the mine when the pre-shift examiner noticed during his exam that something was not right while he was traveling up the beltline approximately five blocks from the faces. He ran into unsafe roof and a fall area that would not let him advance any further onto the section. The section was advancing and had just completed an intake and return shaft which would be located in the No. 2 entry. The air shaft is a split entry with the fan located on the return side that can be used and is safe to ventilate through if needed. Mining has been on going and production has been good since completing the air shaft. Attempts to communicate with the men have been unsuccessful. The mine is currently being ventilated by a return fan located on the surface which cannot be turned off or reversed. The following bulletins are for your information.**

**Maps are up to date**

**Mine is walking height**

**Gas and bad roof does occur in this area**

**All electrical circuits in the section have been de-energized**

**Back up mine rescue teams are on site, but are not available to build ventilation structures for your team**

**Split Air Shaft Separated with an 8” Solid wall Rib to Rib and it is shown on the maps that you will be provided**

**Previous Teams have constructed temporary stoppings across # 2 and # 3 entries inby the fresh air base, they are shown on the maps, and teams have explored in #1 entry to a caved airtight that is shown on the maps also.**

**Problem**

**Account for the three miners**

**Bring all live persons to the Fresh Air Base**

**Explore all areas of the mine that can be safely examined Per National Mine Rescue Rules**

**2**

**Split Air Shaft 8” Solid Separation Wall**

**X**

**X**

**X**

**Split Entry Air Shaft Return Side**

**Split Entry Air Shaft Intake Side**

**Unsafe Roof**

**Caved**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**5,000 CFM**

**BC**

**Command Center**

**D**

**Temporary Stopping**

**Caved Air Tight**

**XXXXXXXXXXXXX**

**3**

**Closed**

**FACE**

**FACE**

**FACE**

**X**

**X**

**X**

**5.5% CH4 0 ppm CO 12.0 % O2**

**5.5% CH4 0 ppm CO 12.5% O2**

**Roof Bolter**

**X**

**BC**

**BC**

**B**

**5.5% CH4 0 ppm CO 12.5 % O2**

**LC**

**Shuttle Car**

**Continuous Miner**

**X**

**X**

**X**

**Battery Phone**

**Door Open**

**Belt Tail**

**X**

**D**

**D**

**Unsafe Roof**

**RA**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Split Air Shaft 8” Solid Separation Wall**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Live conscious “ Help get me out”**

**4.5% CH4 0 ppm CO 12.5 % O2**

**X**

**X**

**Belt Line**

**X**

**B**

**Split Entry Air Shaft Return Side**

**BC**

**X**

**Split Entry Air Shaft Intake Side**

**Start of Smoke/ End of Smoke**

**BC**

**Caved**

**Unsafe Roof**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**Caved**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**5,000 CFM**

**BC**

**Command Center**

**D**

**Closed**

**Temporary Stopping**

**Start of Smoke / End of Smoke**

**Caved Air Tight**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**BC**

**5.5% CH4 0 ppm CO 12.5 % O2**

**4.5% CH4 0 ppm CO 12.5 % O2**

**5.5% CH4 0 ppm CO 12.0 % O2**

**Belt Line**

**Belt Line**

**X**

**X**

**XXXXXXXXXXXXX**

**Scoop on fire**

**X**

**Unsafe Roof**

**4**

**Team Stops, Gas Test, Roof and Rib Test, and Date & Initials**

**GT,DI, R-F&R**

**GT,DI, R-F-R**

**GT,DI, R-F-R**

**FACE**

**FACE**

**FACE**

**X**

**X**

**X**

**5.5% CH4 0 ppm CO 12.0 % O2**

**DI**

**5.5% CH4 0 ppm CO 12.5% O2**

**Roof Bolter**

**X**

**GT**

**BC**

**BC**

**B**

**5.5% CH4 0 ppm CO 12.5 % O2**

**GT, DI**

**LC**

**Shuttle Car**

**Continuous Miner**

**8**

**7**

**GT**

**6**

**GT**

**X**

**X**

**GT**

**GT**

**X**

**Battery Phone**

**Door Open**

**Belt Tail**

**X**

**D**

**D**

**DI**

**RA**

**GT,DI,R&R**

**GT,DI,R&R**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Split Air Shaft 8” Solid Separation Wall**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Live conscious “ Help get me out”**

**4.5% CH4 0 ppm CO 12.5 % O2**

**GT**

**5**

**4**

**GT**

**DI**

**GT, DI**

**GT**

**GT, DI**

**GT, DI**

**GT**

**9**

**X**

**X**

**Belt Line**

**X**

**B**

**10**

**GT, DI**

**Split Entry Air Shaft Return Side**

**BC**

**X**

**Split Entry Air Shaft Intake Side**

**Start of Smoke/ End of Smoke**

**GT,DI,R&R**

**GT,DI,R&R**

**BC**

**Caved**

**Unsafe Roof**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**Caved**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**5,000 CFM**

**BC**

**Command Center**

**D**

**GT,DI,R&R**

**Closed**

**Temporary Stopping**

**Start of Smoke / End of Smoke**

**Caved Air Tight**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**BC**

**5.5% CH4 0 ppm CO 12.5 % O2**

**4.5% CH4 0 ppm CO 12.5 % O2**

**5.5% CH4 0 ppm CO 12.0 % O2**

**Belt Line**

**Belt Line**

**X**

**X**

**XXXXXXXXXXXXX**

**GT**

**Scoop on fire**

**X**

**GT,DI,R&R**

**GT**

**3**

**2**

**GT,DI,R&R**

**GT**

**GT, DI**

**1**

**5**

**Extent of Gases**

**FACE**

**FACE**

**FACE**

**X**

**X**

**X**

**5.5% CH4 0 ppm CO 12.5% O2**

**Roof Bolter**

**X**

**5.5% CH4 0 ppm CO 12.0 % O2**

**BC**

**BC**

**B**

**5.5% CH4 0 ppm CO 12.5 % O2**

**LC**

**Shuttle Car**

**Continuous Miner**

**X**

**X**

**X**

**Battery Phone**

**Door Open**

**Belt Tail**

**X**

**D**

**D**

**Unsafe Roof**

**RA**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Split Air Shaft 8” Solid Separation Wall**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Live conscious “ Help get me out”**

**4.5% CH4 0 ppm CO 12.5 % O2**

**X**

**X**

**Belt Line**

**X**

**B**

**Split Entry Air Shaft Return Side**

**BC**

**X**

**Split Entry Air Shaft Intake Side**

**Start of Smoke/ End of Smoke**

**BC**

**Caved**

**Unsafe Roof**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**Caved**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**5,000 CFM**

**BC**

**Command Center**

**D**

**Closed**

**Temporary Stopping**

**Start of Smoke / End of Smoke**

**Caved Air Tight**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**BC**

**5.5% CH4 0 ppm CO 12.5 % O2**

**4.5% CH4 0 ppm CO 12.5 % O2**

**5.5% CH4 0 ppm CO 12.0 % O2**

**Belt Line**

**Belt Line**

**X**

**X**

**XXXXXXXXXXXXX**

**X**

**Scoop on fire**

**Unsafe Roof**

**6**

**First Ventilation**

**FACE**

**FACE**

**FACE**

**X**

**X**

**X**

**5.5% CH4 0 ppm CO 12.5% O2**

**Roof Bolter**

**X**

**5.5% CH4 0 ppm CO 12.0 % O2**

**BC**

**BC**

**B**

**5.5% CH4 0 ppm CO 12.5 % O2**

**LC**

**Shuttle Car**

**Continuous Miner**

**X**

**X**

**X**

**Battery Phone**

**Door Open**

**Belt Tail**

**X**

**D**

**D**

**Unsafe Roof**

**RA**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Split Air Shaft 8” Solid Separation Wall**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Live conscious “ Help get me out”**

**4.5% CH4 0 ppm CO 12.5 % O2**

**X**

**X**

**Belt Line**

**X**

**B**

**Split Entry Air Shaft Return Side**

**BC**

**X**

**First Ventilation**

**Split Entry Air Shaft Intake Side**

**Start of Smoke/ End of Smoke**

**The first ventilation clears the irrespirable in # 2 and smoke in # 3, along with the explosive in B-line of #2 to # 3. This will allow fresh air to be sent through the unsafe roof to # 1 for second ventilation**

**Note: These three walls must be up before the temporary in # 2 entry inby A-line is taken down**

**BC**

**Caved**

**Unsafe Roof**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**Caved**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**5,000 CFM**

**BC**

**Command Center**

**D**

**Closed**

**Temporary Stopping**

**Start of Smoke / End of Smoke**

**Caved Air Tight**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**BC**

**5.5% CH4 0 ppm CO 12.5 % O2**

**4.5% CH4 0 ppm CO 12.5 % O2**

**5.5% CH4 0 ppm CO 12.0 % O2**

**Belt Line**

**Belt Line**

**X**

**X**

**XXXXXXXXXXXXX**

**X**

**Scoop on fire**

**Does not have to be built since the maps show the temporary stopping outby**

**Unsafe Roof**

**7**

**Second Ventilation**

**FACE**

**FACE**

**FACE**

**X**

**X**

**X**

**5.5% CH4 0 ppm CO 12.5% O2**

**Roof Bolter**

**X**

**5.5% CH4 0 ppm CO 12.0 % O2**

**BC**

**BC**

**B**

**5.5% CH4 0 ppm CO 12.5 % O2**

**LC**

**Shuttle Car**

**Continuous Miner**

**X**

**X**

**X**

**Until this wall is taken down no air will migrate or move air that will cause harm even with the wall down inby in the fresh air base in # 2 or moving the wall in A-line**

**These gases will clear after second ventilation**

**Battery Phone**

**Door Open**

**Belt Tail**

**X**

**D**

**D**

**Unsafe Roof**

**RA**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Split Air Shaft 8” Solid Separation Wall**

**Live conscious “ Help get me out”**

**4.5% CH4 0 ppm CO 12.5 % O2**

**X**

**X**

**Belt Line**

**X**

**B**

**The line curtain can be extended from the rib**

**Split Entry Air Shaft Return Side**

**BC**

**X**

**Smoke & Gases Cleared after First Ventilation**

**Split Entry Air Shaft Intake Side**

**BC**

**Caved**

**Unsafe Roof**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**Caved**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**5,000 CFM**

**BC**

**Command Center**

**D**

=

**Only new wall added from first ventilation**

**Closed**

**Temporary Stopping**

**Start of Smoke / End of Smoke**

**Caved Air Tight**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**BC**

**4.5% CH4 0 ppm CO 12.5 % O2**

**5.5% CH4 0 ppm CO 12.0 % O2**

**Belt Line**

**Belt Line**

**X**

**X**

**XXXXXXXXXXXXX**

**X**

**Scoop on fire**

**Cleared after first ventilation**

**Unsafe Roof**

**8**

**Third Ventilation**

**FACE**

**FACE**

**FACE**

**X**

**X**

**X**

**5.5% CH4 0 ppm CO 12.5% O2**

**Roof Bolter**

**X**

**5.5% CH4 0 ppm CO 12.0 % O2**

**BC**

**BC**

**B**

**5.5% CH4 0 ppm CO 12.5 % O2**

**LC**

**Shuttle Car**

**Continuous Miner**

**X**

**X**

**X**

**Must move battery phone before sweeping barricade**

**Battery Phone**

**Door Open**

**Belt Tail**

**X**

**D**

**D**

**Unsafe Roof**

**RA**

**5.5% CH4 0 ppm CO 12.5 % O2**

**Another ventilation option can be Step#3 b ventiltion that is as shown with the brownish arrows.**

**Will need re tested**

**Split Air Shaft 8” Solid Separation Wall**

**Live conscious “ Help get me out”**

**X**

**X**

**Belt Line**

**X**

**B**

**Split Entry Air Shaft Return Side**

**BC**

**X**

**Only new stopping needed for Step 3a**

**Split Entry Air Shaft Intake Side**

**Ventilation option Step 3 a.**

**BC**

**Caved**

**Unsafe Roof**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**Caved**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**5,000 CFM**

**BC**

**Command Center**

**D**

**Closed**

**Temporary Stopping**

**Start of Smoke / End of Smoke**

**Caved Air Tight**

**XXXXXXXXXXXXX**

**XXXXXXXXXXXXX**

**Unsafe Roof**

**BC**

**4.5% CH4 0 ppm CO 12.5 % O2**

**5.5% CH4 0 ppm CO 12.0 % O2**

**Belt Line**

**Belt Line**

**X**

**X**

**XXXXXXXXXXXXX**

**Will need roof and rib test**

**Scoop fire area**

**X**

**Unsafe Roof**

**9**

**KEY POINTS**

1. **Since # 1 and # 3 entries are blocked with unsafe roof and caved for the team to examine from the fresh air base they have only one way to enter the mine. Remember that the Command Center is located on the surface and the statement explains that previous teams have explored the areas and built temporary stoppings in #2, and # 3 entries just inby the fresh air base and there is a caved air tight in # 1 entry. Also the maps that the team receives will show the areas that have been explored by previous teams and the statement also tells the team that the back -up team will not be used to build in the fresh air base for them.**
2. **The team will need to air lock in so they can advance up # 2 entry because the fan is running and there is an opening inby, (the split entry air shaft). This will be team stop # 1 inside the air lock requiring a 50 ft. pack check.**
3. **Team stop # 2 will be in the first intersection of A-line in # 2 entry where there is unsafe roof inby and in the cross cut toward # 1 entry this will force the team to advance through the open cross cut toward # 3 entry. The team will need the # 5 man to tie off in an area clear of smoke before any team members travels into the smoke and all team members must hold onto the link line when in smoke.**
4. **Team stop #3 will be in the intersection of # 3 entry and as the team advances into the first intersection in # 3 entry of A-line they will encounter a scoop on fire in the intersection. The roof and rib must be tested by the captain perpendicular to direction of his travel, extinguish the fire and take a gas test.**
5. **Team stop # 4 will be in the second intersection of # 3 entry in B-line please note that the team is in smoke and will have to not only have the # 5 man attached to the life line but all team members must hold onto the link line also. The smoke will end at the imaginary lines of the intersection and since all openings must be checked by gas test before the team leaves the area from this stop the air is clear of smoke inby the intersection and through the cross cut toward # 2 entry. In the entry inby the team will be blocked by unsafe roof across the entry from rib to rib diagonally. In the cross cut toward # 2 entry the team encounters an explosive/irrespirable air gas mixture, but due to the clear air separation between # 2 entry and # 3 entry this is not a withdraw situation.**
6. **Team stop # 5 will be in the intersection on the return side of the split entry air shaft in # 2 entry of B-line. The split wall extends from corner to corner in the intersection and is an airtight separation that also prevents further travel through the cross cut toward # 1 entry. Inby toward the third intersection in # 2 entry the team encounters an explosive/irrespirable air gas mixture that extends inby then a R/A with both doors open. Inside the R/A they will find a body. This is the first of the three missing persons the team must find.**
7. **Team stop # 6 will be in C-line of # 2 entry note that the explosive /irrespirable gas mixture has extended into the intersection from outby due to the team’s direction of travel. Inby the team encounters a nonexplosive/irrespirable air gas mixture Due to the 12.0% oxygen, then two brattices and a face, in the cross cut toward # 3 entry the team finds a battery mine phone a line curtain and an non-explosive/irrespirable air gas mixture in the cross cut toward # 3 entry.**

**10**

1. **Team stop # 7 will be in C-line of # 3 entry. The team has encountered an non- explosive/irrespirable air gas mixture in the cross cut toward # 3 entry which will require them to travel to # 3 entry first. There they find an explosive/irrespirable air gas mixture in front of the barricade there is no response from the barricade so the team is not tied to it and can continue to explore. Please note that since the team now has means to ventilate the barricade they might take time to examine if they can ventilate safely. The problem is to ventilate the barricade the battery phone must be relocated and if they move it into the intersection in # 2 entry they move into and through an explosive air gas mixture. They could use ventilation steps # 1 , # 3a or #3b to do so at this time and that is possible with the materials they have and then the phone could be relocated after the second ventilation, but they are not required to do this since there is no response.**
2. **Team stop # 8 will be in # 1 entry of C-linethere they will find an explosive/irrespirable air gas mixture toward the face and a face then they must tie to # 3 entry.**
3. **Team stop # 9 will be in # 1 entry of B-line here the team encounters a caved outby across the entry and in the cross cut toward # 2 entry an irrespirable air gas mixture then a barricade. The team gets a response from the barricade so they are now tied to this barricade and they do have the means to ventilate the irrespirable from in front of it. (See Ventilation Maps # 1 and # 2). Note that in Ventilation # 2 the map shows the line curtain being extended off the solid rib in the intersection which is allowed under Rule 48 D.**
4. **The ventilation for step # 1 will clear the explosive/irrespirable in # 2 entry inby the fresh air base and the team must have stoppings built inby B-line in # 2 and # 3 entries and inby A-line in # 2 entries before removing the stopping inby the Fresh Air Base in # 2 entry so as not to allow air to migrate. Note that in traveling outby to make these builds the team must travel through smoke and be attached to the life line and link line and the fire area will need tested before any team member travels through the area. Once they have establish ventilation and start moving air the gas placards will need checked and the smoke placards turned over also a re-test at the fire area once again traveling back into the mine.**
5. **Once the team has ventilated out the irrespirable from in front of the barricade in # 1 entry they will need to air lock into the barricade where they will find a conscious live man who will need taken out of the mine. Again checking gas placards on the way out with him and the fire area needing a roof and rib test on the way out and back into the mine.**

**11**

1. **The team may choose to return to # 1 entry and travel through the stopping located there since the team is still looking for missing people. They will need to air lock through the stopping which will put them on the intake side of the split entry air shaft and in the intersection of B-line in # 2 entry. Here they will encounter the separation wall and an irrespirable air gas mixture and then the inby side of the unsafe roof in # 2 entry.**
2. **They may choose to go to the barricade in # 3 entry and ventilate the explosive/irrespirable mixture from in front of that barricade. (See Ventilation Step 3a or #3b) This again will require the team to travel outby pass the fire area even if they went to the barricade in # 1 entry first. They will need to move a stopping in A-line from one side of the entry to the other. Once the ventilation is set up the second step ventilation should have removed the explosive air gas mixture in # 2 entry of C-line intersection thus allowing the battery phone to moved either to # 2 , the cross cut toward #3 from # 2 entry or outby toward the diagonal unsafe roof. Once the ventilation has been complete the team will need to air lock into the barricade where they find the last person who is a body.**

**12**

**12**