

New Iberia Problem Solution

Synopsis: Day shift, the haul truck driver is a new miner that was just signed off on the haul truck. After dumping in the grizzly he pulls forward with his bed raised in the dump position and snags the power cable to the #4 transformer. This results in a fire, the haul truck is engulfed and the driver has perished. The bed has maintained contact with the power cable, therefore the power cable is also arcing and burning. The continuous miner operator in entry #1 activated the evacuation after smelling smoke, all miners got out except the foreman and continuous miner operator that had to barricade in the airlock in X-cut #2, 2 truck drivers that partially barricaded in X-cut #1. Heavy smoke is exiting the mine from the exhaust shaft.

1. Upon reaching the FAB the team captain introduces the team to the judges. The #1 Judge then introduces himself and the #2 judge. The team will now start the clock, and then the #1 judge will give the team the briefing statement and information sheet. The team will discuss the conditions presented by the problem and the map. The team will be given a statement that the west shaft has a damaged bonnet that is under repair. The main fan has stopped working and electricians are working on the surface to switch to a different power source. When ready the team must examine the 3-mine openings prior to going underground. As the team leaves the FAB the first stop should be at the #1 exhaust shaft to take gas readings and check the conveyance (also checking for water and heat) the testing material will return wet to ankle deep. The team should ask for the proper testers or tubes depending on the capabilities of their instruments, and count off prior to entering smoke.
2. Team should then take gas readings and test the #2 intake and conveyance. (also checking for water and heat)
3. The team should now check the #3 intake shaft and remember the mine manager informed them that the bonnet is under repair.
4. The teams should enter the mine at the #2 Intake. The team will head west and encounter a temporary stopping with a door partially open. When the team enters the area they will identify two miners, both miners will be alive and wearing SCSR's. The miners will hand over a piece of paper that says "I'm ok and I can walk but I don't want to chance taking out my mouth piece". Ron E. SCSR is not depleted and not damaged. Bill E. SCSR is not damaged but is depleted. The team should replace Bill E. SCSR with another 1 hr. or with a 4 hr. unit. If the team does not replace the SCSR and proceeds to evacuate the miner Bill E. will be in danger once they reach the irrespirable atmosphere. (Improperly protecting a survivor from toxic gases). If done correctly the captain should call out that he is checking the roof over the miners and a primary survey should be performed, Bill E. should be provided with respiratory protection, and the 2 miners taken to the surface and turned over to the FAB. Team may conduct the 50' team check as well. If the team completes exploration of the area they will travel west until they reach a permanent stopping. (FPA/D&I)
5. Team will conduct proper gas checks and D&I. At the discretion of the team they can either advance in-by in entry #1 to the three foot limit or will most likely explore East. Traveling East the team will encounter a check curtain; the team will continue East noting the fire hose, water valve (OFF), and Grizzly at the #3 landing.
6. At this point it is the team's discretion as to which direction to explore. If the team chooses to head in-by in entry #3 they will find 1 set of building material along the west rib. As the team continues they will encounter a haul truck on fire (Energized from 4160v Cable) and 4160v cable arcing and on fire.

NOTE: If the team attempts to use the fire hose to extinguish the fire prior to deenergizing the power on the 4160v power cable, it will not go out and the team will receive discounts for team endangerment.

If the team has the main power turned off from surface the team will be able to address the haul truck and cable fires (With the Fire Hose). (Cable No Longer Arcing/ Fires Extinguished). Fire extinguishers will not put out this fire.

The team may also contact the Mine Manager at this time to request cable cutters and a splice kit to ensure cable isolation. The Mine Manager will inform the team that they have these items on surface. (The team may utilize the equipment anywhere they have explored and observed the 4160 cable).

7. The team may opt to put up a $\frac{3}{4}$ seal in entry #3 to control the airflow over the fire. The captain must call out that he is checking the roof prior to erecting the seal.
8. The team will retreat back to entry #2 and travel in-by to deal with the fire with undue delay. The team will observe the 4160 power feed to T-4 transformer and unsafe roof (scalable) above the cable along the way. The team should address the unsafe roof in specific areas where identified. The team may opt to install a $\frac{3}{4}$ seal in 2nd crosscut at entry #3 to control the airflow to the fire. This can be accomplished by converting the check curtain to a temporary stopping with a regulator. The captain must call out that he is checking the roof prior to erecting the temporary stopping. At this time the team should realize they must retreat back and find the power source to the T-4 transformer and turn off the power.
9. The team will retreat back to X-cut #1 and go to surface to travel the #1 conveyance.
10. When the team chooses to travel the #1 shaft they must count off prior to entering smoke. **NOTE: (If the team did not kill power from the surface they will encounter water ankle deep when they reach the landing. If the main power was turned off, this will allow the landing at the #1 shaft to flood. (Water over knee deep). If the team killed power when they addressed the fires and did not isolate the power cable, once power is restored to the mine for the sump pump, the fires will re-ignite and the team will be required to extinguish the fire a second time.** The team will perform gas tests and tie in East. The team should note the sump pump and a man-trip. The team will now travel in-by in entry #1 they will have to crawl under low roof and should be discounted if they do not check their units if bumped during the crawl. Along the way they will identify mine fan (OFF).
11. The team will note the maintenance truck and continue in-by to the three foot limit. Traveling East the team will encounter a power center with electrical breakers that will be labeled. Breaker #1(ON) powers the sump pump. If the team opts to turn this one off the #1 entry will flood and they will be trapped. Breaker #2 (ON) powers supply for continuous miner, Breaker #3 (TRIPPED) powers T-3, and breaker #4 (ON AND JUMPED OUT) powers the affected transformer. When the team turns the breaker off the placards for the burning and arcing 4160 cable must be flipped to cable burning only. At this point the team will note the barricade and attempt contact with no response. The team should now realize they can now continue addressing the fire if it was regulated originally. **Note: If the team killed power and did not isolate the cable, the fire re-ignited and is still on fire after the breaker has been deenergized. The team will need to reenter the mine thru the #2 intake and extinguish the fire a second time with the water hose. If the team continues exploration and the #5 man advances beyond the #2 crosscut in entry #1, the team will receive a discount for team endangerment (Not addressing a combatable fire).**

12. If the team elected to regulate the fire, the team should opt to retreat and travel the #2 conveyance. The team should travel East in X-cut #1, turn on the water valve, and grab the fire hose, the captain should call out checking the roof over the haul truck on fire. The fire will be extinguished with the fire hose. **Fire will not go out using fire extinguishers.** The team may attempt to use the fire hose on the smoldering cable which will be ok (Cable fire extinguished).
13. Team will identify caved impassable in front of the haul truck and make appropriate markings. The team should travel West in X-cut #2 addressing the smoldering cable and scaling the loose. The team will tie in the intersection of the #2 entry and travel in-by in the #2 drift to the caved tight. Team should note the back-side of the permanent stopping which is the back side of the barricade.
14. Team should retreat back the #1 exhaust shaft and continue exploration North in entry #1, noting the foreman's jeep and a set of building material. The team will continue North and explore the face, noting the continuous miner.
15. The team will continue East in X-cut #3 and encounter the shop with the door open and explore, finding two timbers. Team will continue East and explore Entry #2 south to the caved tight, noting the haul truck and North to identify the face.
16. Team should continue East in X-cut #3 encountering the lunch room with the door open, and explore finding two timbers. Team will continue and explore the face in entry #3 noting the continuous miner and transformer #4. The team will travel South where they encounter caved impassable and tie in entry #3.

NOTE: At this time the Mine Manager will contact the team and inform them that the bonnet has been repaired on the #3 production hoist and the power to the main fan has also been repaired.

17. The team should retreat from the mine and proceed to the #3 intake shaft, checks should be made on the conveyance and shaft traveled to tie in.
18. **All accessible areas of the mine have been explored and the team should confer with the FAB to decide how they will ventilate the mine and request permission from the Mine Manager.**
19. The $\frac{3}{4}$ seals should have been taken down by the team after the haul truck fire was addressed. All the team must do to ventilate is turn on the main fan.
20. It is the team's discretion as to which entry they want to travel. If the team travels the #1 shaft they will have to deal with the low crawl in the #1 entry. Required gas checks should be made at the collar, 1st X-cut, 2nd X-cut. Team will have to use a wing curtain to clear the gasses in front of the barricade in X-cut #2. Due to the unknown conditions behind the barricade the team will be required to airlock into the area. The team may choose to use the building materials used for the wing curtain. When the team enters the barricade the captain will identify a miner under unsafe roof (Scalable) and will be required to utilize ground support techniques as outlined in the 2014 national rule book. The team will be required to use a minimum of four timbers to access the miner safely. When primary survey is performed both miners are dead. The team should note the smoldering 4160 cable in the barricade.
21. All accessible areas have been explored, all live miners have been brought to surface, all fires have been extinguished, and the mine has been re-ventilated. The captain must also tell the Mine Manager that they did not find 1 miner and believe he must have been in the haul truck that burned. Maps turned in to judges, clock stopped.