

Virginia Mining Institute

Day 1

Statement

Thanks, you for answering the Garden Coal Company's call for help. An explosion occurred at this mine several hours ago. We Have 3 miners unaccounted for.

You are located on the surface at the top of a slope entry where a new area is being developed underground. The slope and two ventilation shafts were recently completed. This new development is projected to mine between several old mine workings. A small temporary exhaust fan used during the shaft sinking process is in place on the return side of the No. 1 ventilation shaft. This exhaust fan will produce 45,000 cfm when turned on. This fan is presently off and is operational if needed. A temporary Blowing fan is installed on the No. 2 ventilation shaft. The Blowing fan will produce 65,000 cfm when operating. The no. 2 fan is presently off and is operational when needed.

An area of roofed water is located in the No. 2 entry inby the slope bottom. A stationary pump controls this water and is presently off. The water will roof immediately if the pump is not operating. All electrical power to the underground areas of the mine has been removed but is available to the fan(s) and Pump switches located near the slope portals. If needed these switches can be turned on by contacting the briefing officer.

The mine map is not up to date. A back up mine rescue team is available

When you are ready, Two blank maps, another copy of the statement and your team's written instructions will be provided to you.

Good luck and enjoy your time at the contest!

V-1-23
Team Instructions
Problem

- Account for all missing miners.
- After the team starts the mine fan(s) they cannot be stopped, stalled or reverse.
- The team cannot move any ventilation control that's anchored to the ground.
- Team must identify all missing persons by recording their name on the team map after captain examines the missing person.
- During the development of the slope entry, a methane bleeder was encountered in the mine floor. Attempts to grout the bleeder were unsuccessful. It has been determined that 65,000 cfm of ventilation must be maintained in the slope entry to keep the methane levels below an explosive mixture. If the ventilation quantity is not maintained at 65,000 cfm, the methane levels in the slope will immediately accumulate to an explosive mixture. When 65,000 cfm is established in the slope entry, the airflow cannot be decreased below 65,000 cfm.
- A time limit of 85 minutes has been established for this problem. The team will be advised 10 minutes prior to this time limit expiring

[illegible]







