

2021 MINE RESCUE, FIRST AID, BENCH AND TEAM TECHNICIAN RULES QUESTIONS AND ANSWERS

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MINE RESCUE

Q & A's

- Q1. We are a nonmetal mine rescue team, and the question is are we required to have Visio or not?
A: No. The Command Center Attendant can use a paper map but it won't take discounts off the Briefing Officer/Fresh Air Base Attendant map.
- Q2. On the Mine Rescue Contest rules, in the written exam section part 1 it says the five working team members and the Briefing Officer/Fresh Air Base Attendant will take the written exam. Does that mean both the Briefing Officer and FAB attendant take the exam or just one of them? Need clarification.
A: Briefing Officer and FAB Attendant are the same person (No. 6 team member), just different terminology for the same person.
- Q3. Does MSHA provide the computer for Visio program?
A: No. MSHA will not provide computers.
- Q4. Does the team only have to bring with them is the SD card?
A: Teams need to bring their own computer or equivalent and accessories, power supply to connect to power source plus an SD card for each problem.
- Q5. Is a gas test required at an Air Clear placard?
A: No. A gas test is not required at an air clear placard by Rule 24.
- Q6. Will raising a line curtain to clear a barricade be considered a ventilation change?
A: Yes. Rule 19 states that dropping a line curtain is not, but holding one up redirects ventilation into an area where it was not before the curtain was held up.
- Q7. Will team detectors used for mine rescue be required to have the NO2 sensors installed in them?
A: No, not for mine rescue contest purposes.
- Q8. How many builds will be required to construct a diagonal stopping?
A: Two (2)
- Q9. It was stated under General Information developers must submit each mine rescue problem for part 49 to National Contest Director(s). Who is that specifically? Can you give name(s) and email addresses please.
A: (Nick Gutierrez) Gutierrez.nick@dol.gov (Cass Trent) trent.david@dol.gov

- Q10. Where/when will the new scoring software be made available (Regcon)?
A: The scoring software is currently being developed to include the technician team as a part of the combination and is being converted from an Access program to an Excel program. As soon as it is completed, it will be added to the Holmes Mine Rescue Association website
<https://www.holmessafety.org/holmes-mine-rescue-association-rules-and-contest-resources/>
- Q11. The removal of discount when both a Briefing Officer and a Command Center Attendant map are utilized will be limited to 6 discounts. So, to clarify, if a team has 14 Briefing Officer map discounts but 4 items are correct on the Visio map, 6 discounts (the max) will be returned/removed but the other 8 will stand?
A: Yes, 4 items would be 2 discounts per item which equals 8 discounts, so a maximum of 6 will come off leaving 8 on the Briefing Officer's map.
- Q12. Will a team need to carry "some kind of combustible material" to place on an elevator, or can a team simulate by making a statement?
A: No. Please see Rule 30H for proper procedure.
- Q13. Since H₂S is discussed in Rules 31 and 34 as both percent (explosive range) and PPM (irrespirable), there should be a limit of the PPM shown on a placard to prevent teams having to convert a high amount shown as 9000 PPM H₂S to prevent by volume conversions to determine an explosive mixture. (MAX PPM should be 100).
A: Teams may be required to convert from PPM to percent and vice versa. (For example 9000 PPM = 0.9%).
- Q14. Rule 24B contradicts Figure 4 in that if a team is required to take gas checks in each opening to an intersection, prior to a team advancing or retreating from that intersection, then the gas check at the opening would prove there is no continuation of the gas. Please consider revising either Rule 24B or Figure 4.
A: Rule 24B requires the test to be made, the presence or absence of gas is not determined by the test but by the location of the placards found while exploring. The extent of the gas is explained in Rule 24E and Figure 4. They are not contradictory.
- Q15. B Card, Rule 12 - Do the gloves that are required for examining or handling a patient have to be latex or other medical type glove or would any glove or rubber coated glove be sufficient?
A: Rule says BSI Gloves, this is a medical term so gloves that would prevent contamination between the two parties. Latex or other medical type gloves.

Q16. Page 1, Rule 6 - The 30 minutes for protest doesn't match the protest formats of the other disciplines. Is there justification for that? It seems it makes more sense to keep all formats uniform.

A: 30 minutes was the time agreed to by the mine rescue rules sub-committee and approved by the Advisory Committees.

Q17. Page 1, Rule 7 - Same as the other disciplines. Why should the timing of the remote protest be different from the person who waits on site to protest? There seems to be more time allowed for remote protests than local.

A: Mine Rescue appeals can be done by one of the following methods:

IN PERSON: Within one hour of posting, the mine rescue team captain, team trainer, Briefing Officer or Command Center Attendant, and a fourth team member shall report to the “designated location” for appeals at the contest site. The mine rescue team representatives will have thirty (30) minutes to review the judges’ scorecards, maps, written examination scores, etc. and prepare/submit any written protests. No additional appeals will be accepted after the 30-minute time limit.

ELECTRONICALLY: The mine rescue team will have forty five (45) minutes to review the judges’ scorecards, maps, written examination scores, etc. and return any written protests to support their appeal back to the Contest Officials via email.

- The 45-minute review clock starts when the team opens the email document which initiates the sending of the “read receipt” email back to the Contest Officials.
- The team then has 45 minutes to return any written protests to support their appeal back to the Contest Officials via email.
- The team has two hours from the time the results are ready for review and are posted outside the “designated location” for appeals at the contest site to open the email sent by the Contest Officials and complete their response.
- Forty five (45) minutes is the maximum allotted time for the electronic review.
- For example, if a team waits for one hour and 50 minutes once the results are posted at the contest site to open the email sent by the Contest Officials, they only have 10 minutes to complete their review and email any protests back to the Contest Officials.
- Electronic Reviews received by the Contest Officials after the 2-hour time limit or after the 45-minute review time limit will not be accepted.

Q18. Are teams required to field a Command Center Attendant? If a team doesn't field a Command Center Attendant are the judges going to allow the team to compete at all competitions?

A: The Contest Director(s) may exempt a team from the eight person minimum, but in no case will the team consist of less than the minimum requirements set forth in 30 CFR 49.2(b) and/or 49.12(b).

Q19. If there is no Command Center Attendant, can the Briefing Officer still perform work in the FAB?

A: Yes

Q20. 30F, second paragraph - Mr. Biggerstaff, if there is a placard in elongated unsafe roof that says "person" that person could be mapped because you have explored it. So this means there is no longer a requirement to map 'X' then label person, and then change that back to the symbol after hands placed on. We just use the symbol to start with.

A: No. There is no symbol for a person so an "X" should be used. After the team examines the person and determines if it is a "Live Person" or a "Body", the correct symbol must be mapped beside the "X".

Q21. In the case we run across a placard that says BODY we aren't required to map an orientation. If the placard has the symbol on it, is orientation still required? There is an inconsistency in how the docks work of one is penalized and the other isn't.

A: The Map Legend clearly says that orientation is not required for placards that say "Body" (see page 56).

Q22. Concerning maps Rule 1 page 5, will both the Team and Briefing Officer or Command Center Attendant map be judged? Or one of the three?

A: Team map will always be judged. The team can mark whether they want the Briefing Officer or Command Center Attendant map to be judged. If the team chooses the BO map and the Command Center Attendant uses a Visio map, it will be judged to determine if BO map discounts can be removed (Rule 7, 3rd paragraph). If the team chooses the electronic Command Center Attendant map, it will be judged; and if there are discounts on the electronic Command Center Attendant map the paper BO map will be graded to see if discounts (max. 6) can be removed from the Command Center Attendant map.

Q23. Will team map be required to include objects not required on Briefing Officer/Command Center Attendant Map, example "Used SCSR"?

A: Yes. The two lists of requirements are different (see A Card, Rule 5 & 6).

Q24. If a team finds an air clear placard in the center of an intersection, is the entire intersection clear or will the gas stop at the air clear placard and only part of the intersection will have the gas in it?

A: The entire intersection would be clear.

Q25. Permanent stopping or permanent bulkhead under the Unified rules, can these be removed or modified, yes or no? (Under old MNM glossary of terms states, Permanent stopping/permanent bulkhead for the duration of the problem, a ventilation control which cannot be removed or modified).

A: Yes

Q26. Unified A Card, Rule 5D on mapping: Do you have to timber into these conditions stated in this section to be consider as explored, or are they consider made for the purpose of ventilating through when passing by and mapped, Yes or No? (Under old coal rules this was consider as being explored and no timbers were needed to ventilate through these areas as long as nothing was present in the areas that would go against other rules of team endangerment or patient endangerment). (Under old MNM rules you would have to timber through diagonally unsafe roof extending from rib to rib because they never had anything addressing this in the rules).

A: They are considered explored and can be ventilated thru unless other objects or condition prohibit it (i.e. ignition source, person, caved, etc. in the unsafe roof).

Q27. Unified A Card, Rule 6 mapping for Briefing Officer/Command Center Attendant: Will you be discounted for accurately (verbatim), yes or no? This rule does not state the same as 1st paragraph of unified Rule 5 for team mapping requirements that states accurately (verbatim).

A: No

Q28. Unified A Card, Rule 6 mapping for Briefing Officer/Command Center Attendant: Will these maps be held to the same requirements of Unified rule 5F on 6 foot, yes or no? If no, how far off can each object or condition be mapped?

A: No, concerning the 6 feet tolerance. Next to last paragraph of Rule 6 states that the objects and conditions must be in the correct order the captain encounters them and in the same entry, crosscut or opening.

Q29. Unified A Card, Rule 6 mapping for Briefing Officer/Command Center Attendant: If the team calls out they have located a CAT 773 diesel haul truck will this object have to be mapped, yes or no? Reason for the question I don't see equipment in the list to be mapped in the object/condition section.

A: No. It will not be considered an ignition source unless the placard says it has a battery.

- Q30. Unified A card, Rule 6 mapping for Briefing Officer/Command Center Attendant: If the team calls out they have located a CAT 773 diesel haul truck and the written information gave to the team stated all diesel equipment have two 12 volts batteries installed for starting purposes, Would this make it an ignition source that would require to be mapped, yes or no?
A: Yes. Rule 31 D states that “all batteries except cap light batteries” are ignition sources. This should be indicated on the placard and not in the written statement. Problem designers shouldn’t make teams guess whether a piece of equipment is an ignition source. It’s easy enough to put CAT 773 Truck with Batteries or Battery Scoop on the placard.
- Q31. Unified A Card, Rules 5 & 6 on mapping: If the CAT 773 haul truck is mapped, would you use an X and write out on map what’s on the placard; yes or no? Reason for the question old MNM rules used a rectangle shape box to identify all mobile equipment by the legend, not an X.
A: Yes. It is an “X”.
- Q32. Unified A Card, Rule 6 mapping for Briefing Officer/Command Center Attendant: If the team calls out that they have found the following condition; water knee deep, will you be discounted if you don’t put the water symbol on the map and write out knee deep; Yes or No? Reason for the question rule states water in depths that prevent travel to be located on map.
A: No. Water knee deep isn’t required on the BO Map but it’s not a discount if they choose to map it or just write it out without a symbol.
- Q33. The old MNM Rules required the locations that the captain DI in the mine to be placed on the map, and GT for gas testing taken was to be placed on both maps. Under Unified A Card, Rule 5 or 6, is this required; yes or no?
A: No
- Q34. Unified A Card Rule 5 and 6 mapping: the rule states in both sections the following changes must be noted on the map, ignition source relocated. Can you write “relocated” beside the ignition source only or do you have to show where you moved it to?
A: Rules 5 and 6 both require ignition sources to be mapped where they are “found.” Rule 5L and 5 2nd paragraph require objects that are “left” in the mine, both include ignition sources. So, you must show on both maps where you find them and where you leave them.
- Q35. Unified A Card, Rule 5 team map: Would an X be the proper symbol for a borehole placard; yes or no?
A: Yes

- Q36. Under the Unified rules, can an open borehole to the surface or another level of the mine be used for ventilation purposes, yes or no?
A: No, unless the use of open boreholes for ventilation purposes is defined in the written instructions.
- Q37. Unified Rule 18 failure to give proper notification of team's intention: Many of the MNM team's uses bicycle horns to call for stops and advancing, will this still be accepted if they don't communicate with command center first of teams intention before sounding their horns and stopping or advancing, yes or no?
A: The team can use horns to communicate with each other if they choose to but they must communicate their intentions to and receive a reply from the Briefing Officer before advancing or retreating. Teams can use standard lifeline signals if their verbal communication fails.
- Q38. Unified Rule 18 failure to give proper notification of team's intention: after number 5 team member has stopped, can he or she move from their fixed location in any direction without first requesting this move through the command center, yes or no?
A: No, he must remain at that location until he gives and received reply from the Briefing Officer. "If the team is stopped and gives a signal to retreat or advance, the No. 5 team member must await return signal prior to moving".
- Q39. Unified Rule 24E: If a gas placard was found outby a ventilation shaft or in the intersection at the shaft bottom, would the gas extend up the shaft; yes or no?
A: Yes
- Q40. Unified Rule 31A: If batteries are identified on placards or team information of being on any equipment or devices that the team cannot move, if the team simulates they are unplugging the battery or stating turning off switches to de-energize, would this be acceptable as removing the ignition source to ventilate an explosive gas over device or the machine location; yes or no?
A: No, a battery cannot be de-energized.
- Q41. Under old MNM rules all unconscious persons found in the mine had to be provided with a breathing apparatus no matter what. Question to Unified Rule 34 - do breathing apparatus have to be placed on all unconscious patients even if not found in or will be taken through irrespirable atmospheres; yes or no?
A: No

- Q42. Old MNM rule required airtight stoppings or bulkheads with irrespirable atmospheres at them to be treated as the same as a barricade, even with no one talking behind the airtight structure. Unified Rule 35 address only airtight barricades and verbal contact is made behind an airtight structure to be cleared prior to breaching, yes or no?
A: Only if there are verbal communication with someone behind the airtight ventilation structure. "If an irrespirable atmosphere is encountered immediately outby an airtight ventilation structure and verbal contact is made with patient, the team must remove the irrespirable atmosphere before breaching the structure."
- Q43. Old MNM rules used 2 + 3 in systematically exploring of the mine. Unified Rule 44E examine workings systematically eliminates 2 + 3 requirements, yes or no?
A: Yes
- Q44. Does every mine rescue team competing in the Nationals have to enter a Technician team?
A: No
- Q45. Will the combination award at the Nationals include a mine rescue team, a first aid team and a Technician team?
A: Yes
- Q46. This is a question in reference to the hoist bell question where there is nothing in the rules yet for it. On the coal side of mine rescue when it has come to fan control switches, pump switches, etc. we have always used a switch that is located in the command center and can be switched off and on by request from the team underground. Why not just use that same system for lowering and raising the hoist/elevator for checks with a switch located in the command center that can be utilized upon the request of the working team?
A: If hoist signals are to be used in the contest, the procedures for operating hoisting equipment will be included in written instructions.
- Q47. H₂S is considered irrespirable at 10 ppm and explosive is 4.3%-45.5%. If a placard is found showing explosive H₂S is it always considered irrespirable?
A: Concentrations in the explosive range would definitely be irrespirable.
- Q48. Once H₂S, SO₂ or CO₂ are found on a placard, will it continue to be noted on the following placards until stated otherwise or will you have to continue stating that you are checking for that gas throughout the problem?
A: Only until the team determines the extent of said gases. (See Rule 24A second paragraph and 24E)

- Q49. Can teams airlock and breach permanent stopping without doors?
A: Yes
- Q50. Can teams rebuild a permanent not intact stopping into a temporary stopping?
A: Yes
- Q51. Can teams remove and rebuild not intact permanent stopping in other locations as temporary stoppings?
A: Yes
- Q52. If a team tears down a barricade and then has to rebuild the barricade is this build a barricade, or is it a temporary stopping?
A: If the team only takes down one side and puts it back up it remains a barricade, but if the team completely disassembles the barricade, takes down both sides, it will be a temporary stopping when rebuilt.
- Q53. If a team finds placards that say timbers, are the timbers mapped with a circle or an X?
A: "X"
- Q54. Rule 12 pg. 21, team members examining or handling a patient/body must wear proper PPE, nowhere does it say they must be changed when touching other patients is this correct?
A: No. "Proper Body Substance Isolation (BSI) (gloves) per patient" means changing gloves for each patient.
- Q55. Rule 12 pg. 21 when assessing an unconscious live person teams must look for life threatening injuries, are there going to be any life threatening injuries to treat?
A: No
- Q56. Rule 18 pg. 23 teams using telephone or wireless communications must report their intentions to the Command Center Attendant or B.O. does it matter who responds to the team? Teams must at least at a minimum have a B.O. at contests.
A: The rule says the communication is "between the No. 5 team member and the Briefing Officer/fresh air base attendant". In the coal rules in previous years the Briefing Officer was located in the command center is the reason for the confusion. The communication has always been between the No. 5 team member and the Briefing Officer.

- Q57. Rule 24 pg. 27 how many gas tests are required in a newly unexplored opening with a caved, unsafe roof, etc., one for the opening, and one for the condition that prevents further travel, so two gas tests?
A: No. One, the gas test at the condition will satisfy the required test for the opening, but the test for the opening will not satisfy the requirement for the test at the condition unless it is taken immediately outby the condition.
- Q58. Bodies would no longer be permitted under elongated unsafe roof. That it could only be a person. Did I hear correctly?
A: The placard will say "person" until the roof is supported and the "person" examined to determine his status will be determined by a placard.
- Q59. I have another question on field part, considering mine gases. We have called it on field, CH₄, O₂, NO₂ and H₂S. We need more clarification on this please.
A: Chemical symbol or name will suffice, both mean the same thing.
- Q60. Can the Command Center Attendant mark his findings on a paper map if they do not have a computer, or is the Command Center Attendant required to do his mapping on an electronic map?
A: Yes, he can use a paper map but only Command Center Attendants that use the computer map will have their map examined for possible removal of discounts from the BO map.
- Q61. Page 28, Rule 24, C: While checking entrances, prior to the entire team entering the mine, it has been observed that the Captain and #2 or Gas Man will airlock and breech a stopping and explore to the outby plane of the next intersection and leave the other team members and equipment in the Fresh Air Base. It seems that this practice violates the first priority of mine rescue as well as several rules. Why are teams not discounted for this practice?
A: Rule 24C limits the team exploration to 25 feet inby the FAB but doesn't limit the team on what work they can do.
- Q62. Page 35, Rule 31, B, second paragraph: During a designed withdrawal, if a team chooses or is forced by problem design, to retreat through an unexplored area of the mine, does this rule still apply?
A: Yes. Teams cannot choose to "retreat through unexplored areas" and problem designers that makes a team explore after a withdrawal is found is making a team break a rule and that should never be done.

- Q63. If a gas box or placard does not relay a concentration of gas according to the layout of National Mine Rescue rules and guidelines, for example; 0.5% CO versus 5000 ppm CO, would that be represented with an X or accompany a gas box symbol?
A: CO should always be PPM on the placard. However, the gas mixture symbol will be used and information will be written out verbatim.
- Q64. Updated Visio Map Symbols: The symbol for **Clean** Air Should be changed to **Clear** Air to match the Symbol Key in the 2021. National Mine Rescue Rules.
A: Corrected on the Visio Map Symbols.
- Q65. Updated Visio Map Symbols: The Auxiliary Fan Symbol, when dragged to the map has some unexplained appendages.
A: Appendages represent the tubing attached to the auxiliary fan.
- Q66. Interpretation of B Card, Rule 30 H: Failure to verbalize checking the elevator/conveyance shaft for possible damage, or the presence of fire or flooding prior to using it. Is the team required to do this once during the working of the problem, for instance; prior to the first or initial use, or every time prior to using the elevator/conveyor shaft?
A: Prior to using it means the first time they use it, subsequent uses is just continuing to use it.
- Q67. Fresh Air Base procedures: The second paragraph gives examples of equipment that must be "Checked". Coal mine rescue teams don't typically carry hammers since we stopped using wooden header sets and brattice, and they are not listed in the required materials under Rules Governing National Mine Rescue Contests, Rule 2. Is a hammer going to be a required item for teams to bring to the field or is this an example of something a team might use as a sounding devise? Might the rule just imply that if you choose to bring a hammer, it must be checked?
A: A hammer is not required equipment that teams bring to the field.
- Q68. Does an "air clear" placard clear smoke or is the "air clear" placard only used for Gases?
A: Only used for gases unless indicated with end of smoke.

Q69. Under Written Examination #2; will questions be taken from the General Review Questions also?

A: Yes. The Unified Mine Rescue Team Contest Training Module Study Guide can be found on MSHA's Website at

https://www.msha.gov/sites/default/files/Training_Education/DRAFT%20Unified%20Mine%20Rescue%20Team%20Contest%20Training%20Module%20Study%20Guide.pdf.

Q70. Was not the contest set to be in Reno, NV this year? Why did it change?

A: The M/NM contest was scheduled to be held in Reno, NV in 2020. The National Contest 2021 will be held in Lexington, KY.

Q71. During the discussion it was stated the Metal/Nonmetal teams and the Coal teams each will have their own awards. I thought this was going to be joint contest. If this is really going to be a joint contest and being that it is the first time coal and metal competed together. I recommend an overall winner of the contest, taking the two top teams - the one from Metal/Non Metal that won and the one from Coal that won - checking their scores and whatever team has the best score be awarded the overall winner of the contest. I believe that would really help with jointing the two together.

A: The 2021 National Contest awards are to be determined.

Q72. Can it be verified as to exactly what parts of the review questions the written will be taken out of? One section is labeled review questions and the other section is labeled general review questions.

A: Questions can be taken from review questions, general review questions, and glossaries. The Unified Mine Rescue Team Contest Training Module Study Guide can be found on MSHA's website at

https://www.msha.gov/sites/default/files/Training_Education/DRAFT%20Unified%20Mine%20Rescue%20Team%20Contest%20Training%20Module%20Study%20Guide.pdf.

Q73. If a gas placard was located in the picture on the right, does the gas in the intersection extend into the unsafe and combine with the gas that is already in the unsafe or does it stop at the diagonal unsafe?

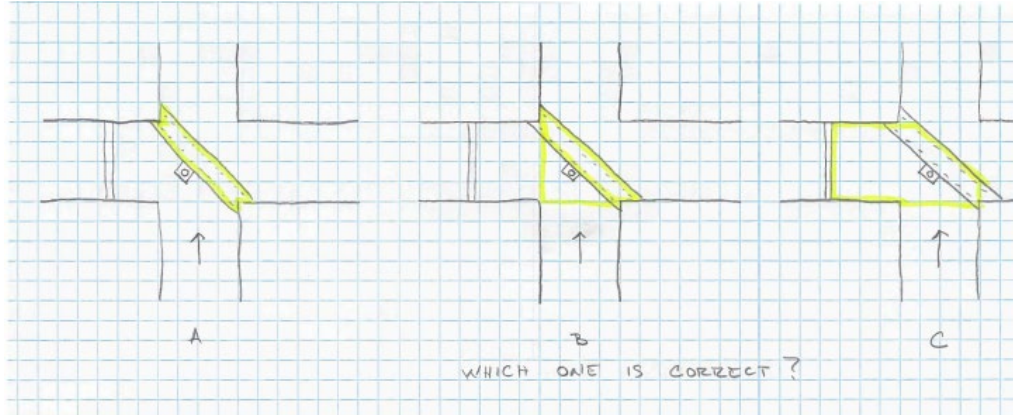
A: The gas at the intersection would stop at the unsafe roof.



Q74. If a team encounters smoke and the smoke runs up the entry and nothing stops the smoke but the team encounters an area of unsafe roof or caved would the team map the area between the unsafe roof and caved?

A: A Card, Rule 4. If team travel is stopped by a condition of the mine conditions and/or objects that are in advance of the point that the Captain has traveled shall not be reported on the maps unless traveled by the team.

Q75. Which of the following diagrams is correct with regard to the extent of gases?



A: Diagram C is correct with regard to the extent of gases.

Q76. Under Rule 29, Can the contestant do a partial roof test through the intersection and pass the person before setting timbers, or must they roof test up to the patient, set timbers, and then finish the complete roof test?

A: The roof test can be completed in the intersection and the area made safe. The team must set timbers and contact the person before leaving an intersection.

Q77. Is the contestant required to change gloves after touching a body when going to a live patient?

A: Yes

Q78. Are the gas detectors required to be on during the working of the problem? Was told they can be off during adverse weather but this will give an advantage to the teams if the morning rounds are good weather and afternoon is adverse weather. The advantage is the teams that have the detectors off eliminates the discounts if detector fails.

A: Yes. The detectors must be on. There is no discount for detector failures only for continuing to use defective equipment. Local contest directors can make exceptions in adverse weather.

- Q79. Under Rule #25 the very last sentence states that “The Team member shall verbally identify each test.” In that rule for testing with a gas detector, it identifies the gases that shall be tested and the proper location for the test to be made. It also identifies the new gases that are required to be tested when they are indicated by placard.

So if there is a placard that has

- 4% CH₄
- 9 PPM CO
- 5 PPM NO₂
- 19.4% O₂
- 4% H₂S
- 1% SO₂

Would the team member verbally call out each gas indicated on the placard as he progresses through the different levels for each test as stated in Rule #25?

A: Yes. Teams will be required to verbalize each gas indicated at the proper levels to test for each gas. Gas quantities are not required to be verbalized.

- Q80. Rule 24 E shows how the gases are indicated on the placards as example CH₄ for methane and NO₂ for Nitrogen dioxide. That being said and in the Rule should a team member call out the gas found on the placard as CH₄ instead of Methane since that is what is written on the placard and required by Rule?

A: No, teams will be allowed to verbalize the symbol or the gas name (Example CH₄ or Methane will suffice).

- Q81. Figure 4 extent of gas, Overcast if a gas placard found under overcast would gas be above and under overcast?

A: No

- Q82. Is the Command Center Attendant required to have a current physical?

A: No, unless they would have to fill in as a working team member to satisfy Part 49 requirements.

- Q83. Do the training requirements (monthly, under air, etc.) apply to the Command Center Attendant?

A: No, unless they would have to fill in as a working team member to satisfy Part 49 requirements.

- Q84. Do these detectors need to be tested in the FAB after the clock has started?

A: No

- Q85. Does a clear air placard stop smoke?

A: No

- Q86. At what point will detectors be checked in lock-up? Just before a team leaves the fresh air base, or at any time in lock-up.
A: Any time during lock-up. Teams are responsible for checking their own.
- Q87. If an energized auxiliary fan is encountered during a problem is it to be considered an ignition source?
A: Yes
- Q88. Referencing the changes in Rule 24(e) it states that if no placard is present to indicate the end of the gas or a change in the gas, the gas will be considered to extend to the location of a placard indicating a change or end of the gas or an airtight structure. Is this considered to be just like smoke and the extent of gas will continue in and through a caved or unsafe roof situation since there is no clear air placard or it is not an airtight structure? Reference Figure 4 of the extent of gas page using the unsafe roof just in by the Fresh Air Base in number 1 entry. Should the gas extend into the next intersection and to the stopping toward number 2 entry?
A: No
- Q89. Can you simulate changing gloves when you encounter a live person and a body behind a barricade?
A: No
- Q90. Are H₂S, SO₂, and CO₂ going to be also included in the list of contaminants, for the purpose of exploration?
A: No
- Q91. If you have an unsafe on a corner, can you timber into it, and make it safe for the purpose of ventilation, such as installing a diagonal stopping, from corner to corner?
A: No for unsafe rib or caved area, yes for unsafe roof if supported by team and water over knee deep that is pumped by the team.
- Q92. Page 13 Rule #4, would a single open regulator or open door satisfy “all the air” if it is the only airway open?
A: Yes. Regulators will not be used in mine rescue problems, all of the airflow from at least one opening will be required to ventilate a barricade, or remove gases and/or smoke.
- Q93. Page 25 Rule #21, Does this mean even radio teams must be linked together to explore?
A: Yes

Q94. Page 25 Rule #20, May a team with sufficient “rope” go through smoke multiple times with multiple “ropes”?

A: Yes. Multiple ropes can be used at team’s discretion.

Q95. Can we please make the order of gasses tested make sense, light to heavy?

A:

- METHANE - Detector shall be held at eye level or higher
- CARBON MONOXIDE - Detector shall be held at chest (between neck and waist) level
- NITROGEN DIOXIDE, SULFUR DIOXIDE, CARBON DIOXIDE, HYDROGEN SULFIDE, and OXYGEN DEFICIENCY – Detector shall be held below the waist level

Q96. Page 37, why shouldn’t we use all the gasses we study??

A: For Contest purposes, only the seven gasses will be used: Methane, carbon monoxide, nitrogen dioxide, oxygen, hydrogen sulfide, sulfur dioxide and carbon dioxide.

Q97. Page 39 Rule #41(a), Why limit the number of patients in a refuge alternative to one?

A: So a team will not have to leave a live person in the refuge alternative if breathing protection is needed for two persons and only one apparatus is available. Maximum of one (1) live person may be found in each refuge alternative.

Q98. If an obstacle fire is encountered it is to be fought with 2 fire extinguishers? May we please require or make available 2 extinguishers so as not to teach bad or wrong mine rescue?

A: Rule 2, page 3, each team must have at least one portable fire extinguisher. Fire extinguishers can be used more than once if multiple fires are encountered during the problem.

Q99. Rule 34 Note – It states – If a survivor is found and is wearing an approved SCSR, The team will not be required to replace it unless the SCSR that they are wearing has been depleted. How will the team know the SCSR is depleted? Will the survivor use an actual SCSR or a training model? Will the judge tell the team the SCSR is depleted or what if the survivor states it’s hard to breath? Should the team assume the SCSR is depleted if the survivor states it is hard to breath?

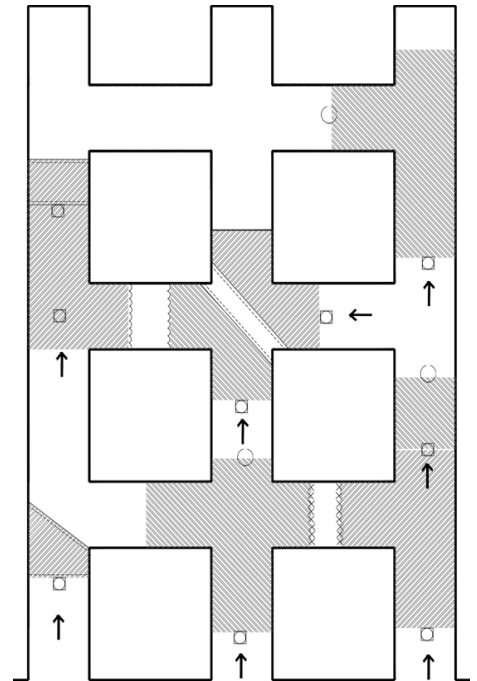
A: The team will be informed that the SCSR is depleted by a placard or a note given to the team according to the design of the problem.

Q100. Has the rule changed regarding gas going into elongated unsafe roof and half-moon caved?

A: No

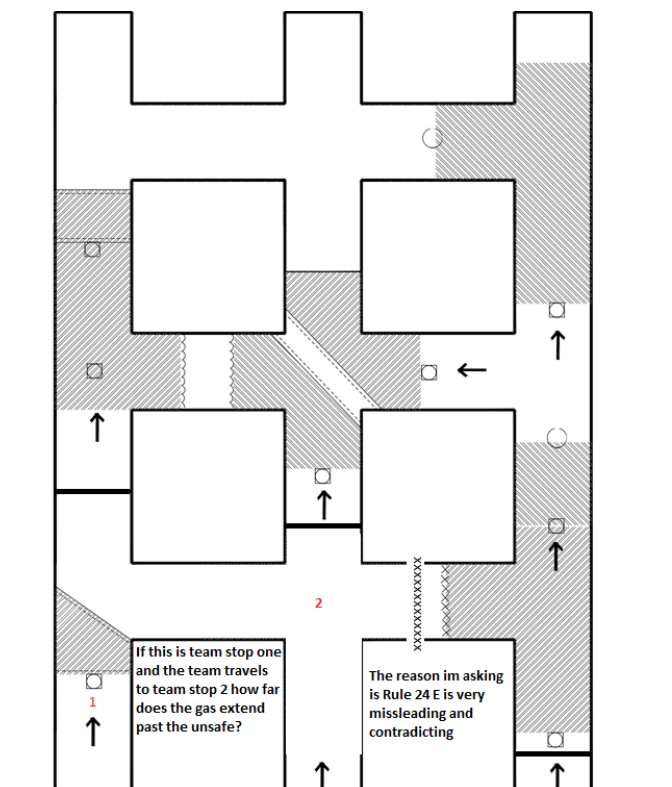
Q101. Please see the figure to the right. Rule 24E states a placard or airtight separation is needed to change or to stop a gas, then states a placard has to be placed on inaccessible area for it to extend into it. How is water over knee deep, unsafe roof, and caved an airtight separation?

A: If gas is intended to extend into inaccessible areas, both placards must be side by side immediately outby the inaccessible condition.



Q102. Please see the figure to the right. If this is Team Stop 1 and the team travels to Team Stop 2, how far does the gas extend past the unsafe? The reason I'm asking is Rule 24E is very misleading and contradicting.

A: The gas in # 1 extends into the unsafe roof including the inaccessible part of the intersection.



Q103. Map Legend – the map legend does not have symbols for Date & Initial (DI) and Gas Test (GT). Do these no longer need to be recorded on the maps? If they should be recorded on the map, what symbol should be used?

A: Not required to be shown on map.

Q104. Page 23, Rule 18 – states that verbal communications of the team's intentions is between the No. 5 team member and the Briefing officer. Our team is setup with the No. 3 team member in verbal communications with the Briefing officer. Will our team be assessed this discount?

A: Yes, verbal or standard lifeline pull signals shall be used between the No. 5 team member and the Briefing Officer/Fresh Air Base Attendant. Other communications concerning conditions of the mine can be between any team member and the Briefing Officer/Fresh Air Base Attendant.

Q105. Is Clear Air required to be mapped by the Briefing Officer?

A: No

Q106. In Rule 25, when it says per 10 discounts per problem, does that mean a total of 10 max gas testing discounts per entire problem or is it each location can only get you a max of 10 discounts per problem?

A: For Improper procedure when testing with gas detectors. Not to exceed 10 total per problem.

Q107. Is CAREvent still an approved breathing apparatus? (Rule 34)

A: Yes

Q108. Can an Air Clear placard end smoke or just gas constituents?

A: An Air Clear placard will not end smoke.

Q109. Can we still turn spotters off during working of problem?

A: Only if contest director allows it, (example, inclement weather)

Q110. Can you get docked for testing all 7 gases on every gas test?

A: No

Q111. Rule 32, third paragraph is marked out. Does that mean that teams do not have to timber bodies, that bodies must be timbered before all persons are accounted for and before Captain passes a body? Do you have to return immediately after roof support is found to timber bodies in inaccessible areas?

A: No body placards will be face up under elongated unsafe roof, only a person placard.

Q112. Page 56 map symbols, in what way can a fan with tubing be incorporated into ventilation? Does tubing have to be isolated going from intake and into return? If so, how do you isolate it?

A: It must be installed in a manner that it incorporates all of the airflow from at least one opening will be required to ventilate a barricade, or remove gases and/or smoke.

Is a fan with tubing portable?

A: Yes

Is a fan with tubing an ignition source?

A: Yes, when an electrical fan or power cable is energized.

How is a fan with tubing powered?

A: Normally by electricity.

Q113. Rule 24A, will hydrogen sulfide, sulfur dioxide and carbon dioxide be on the gas placard or will they be on separate placards? If so, will it need to be mapped as separate symbols?

A: Placards should be large enough to accommodate all the gases in the mixture and with lettering large enough to be easily read. Only one gas mixture symbol will be required.

Q114. Rule 23, are the words “examination” and “appropriate” just additional verbiage?

A: Yes

Q115. How will bulkheads be mapped? X?

A: This is an oversight by the Rules Committee. Bulkhead is the same as the permanent stopping and should be mapped as such.

Q116. Do you have to airlock through a bulkhead? It does not say so in the rules.

A: This is an oversight on the rules committee, bulkhead is the same as the permanent stopping and should be treated as such.

Q117. Do you have to vent an irrespirable out in front of a bulkhead if you have a response from other side with irrespirable in front of it?

A: Yes, if the bulkhead is going to be breached by problem design.

Q118. Is bulkhead treated like a temporary or permanent stopping?

A: Permanent stopping.

Q119. What if I do a test run on elevator and the materials are wet. How do I know the level of the water? If it's wet, does this mean I cannot use the elevator?

A: If the material is wet or on fire, the elevator cannot be used until the condition is addressed.

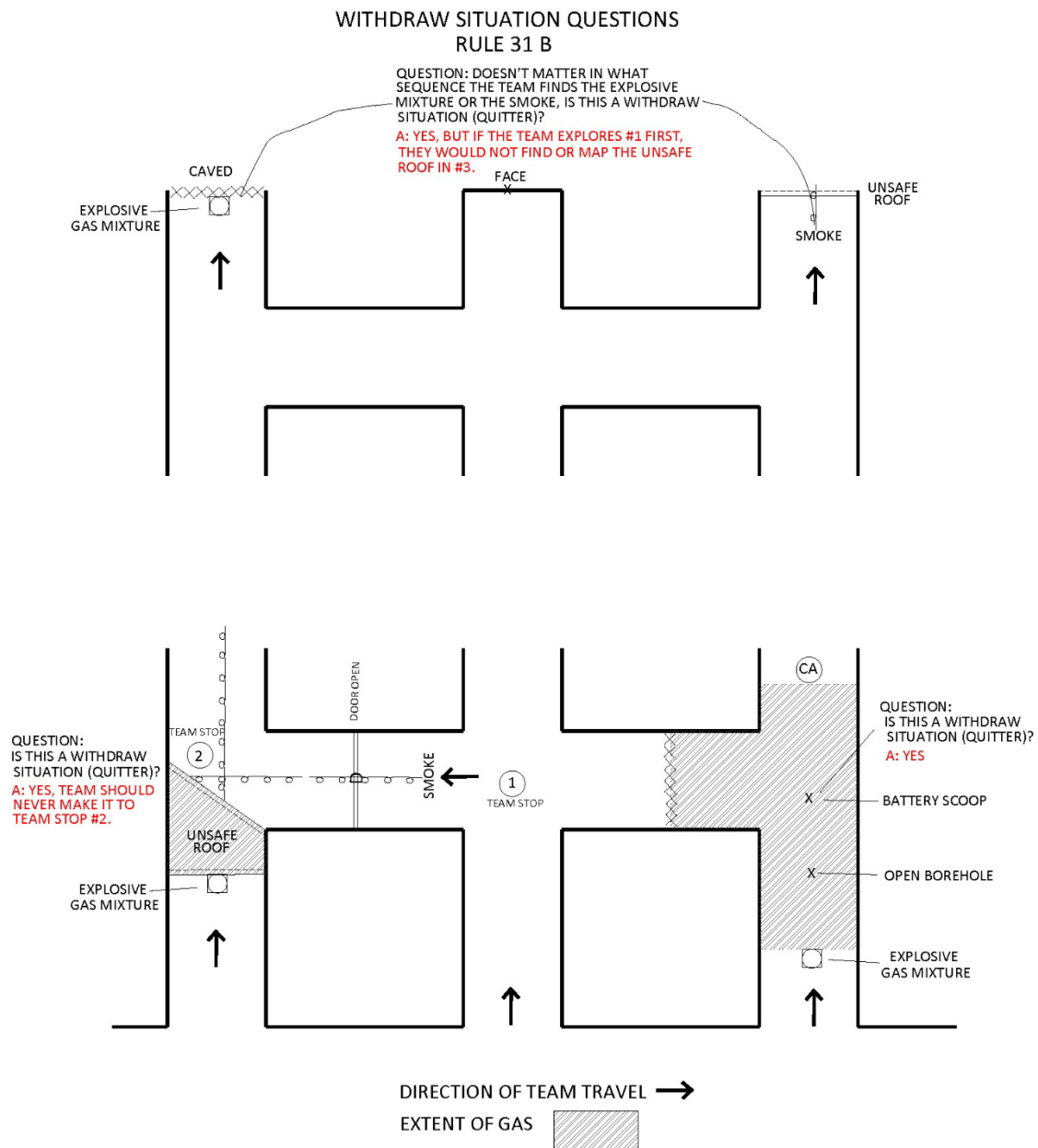
Q120. B-Card Rule 19. Does permission for ventilation changes have to come from Briefing Officer, or can the Command Center Attendant approve requests for ventilation changes?

A: Briefing Officer

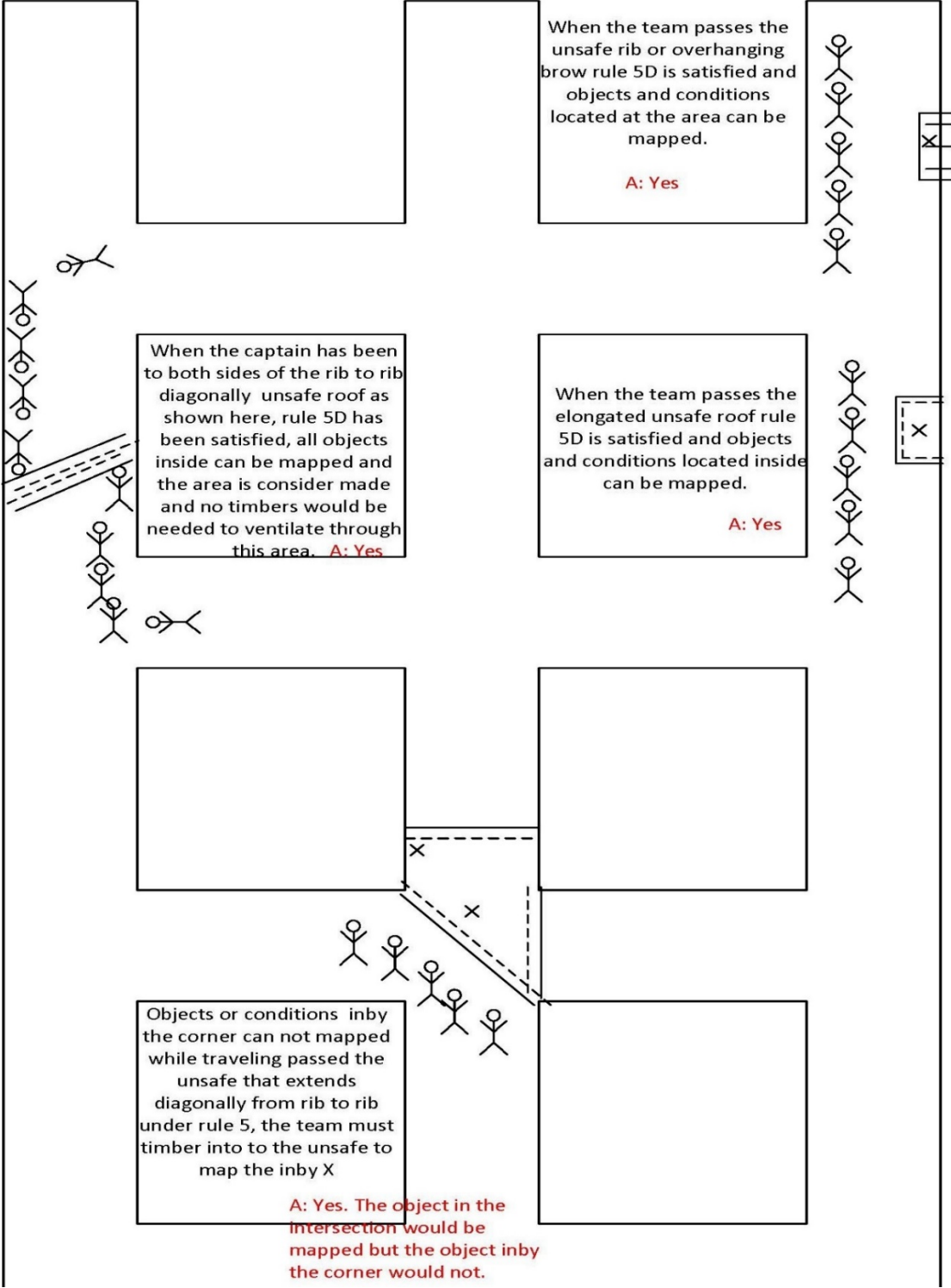
Q121. When timbering through unsafe roof rib to rib, would the gas encountered outby the unsafe roof extend through the condition?

A: No, unless another gas placard is found side by side with the unsafe roof placard.

Q122. Please review the figure below for questions related to withdrawal situations.



Q123. Please review the figure below for questions on the intent of A Card, Rule 5D



Q124. Please address the scenarios on the following sketch.

IS THE EXTENT OF THIS GAS INSIDE THE CAVED AREA? A: Yes

DOES THE EXTENT OF THESE 2 GASES MIX? A: No, the gas in the crosscut between Team Stop 4 and 5 would extend all the way into intersection at Team Stop 6. The gas found in #1 would stop at the outby plane of the intersection of Team Stop 6.

%CH ₄
PPM CO
PPM NO ₂
% O ₂

NORMAL GAS PLACARD

A: Yes

WILL THE FOLLOWING GASES BE AN ADDITION TO THE NORMAL PLACARD OR A STAND ALONE PLACARD

SO₂
CO₂
H₂S

PPM CO₂

IS THE EXTENT OF GAS THE SAME FOR THESE GASES IF THEY ARE ON A STAND ALONE PLACARD?

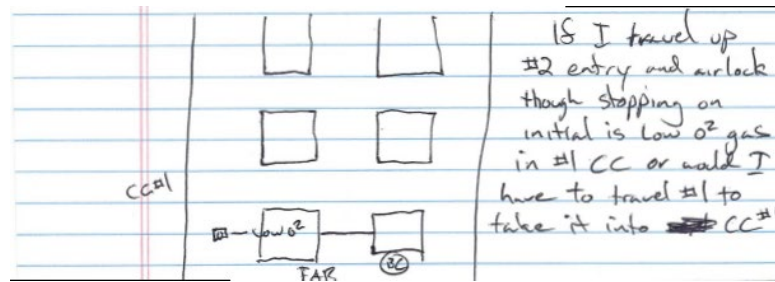
A: Will be added to the normal gas placard at the bottom on the same placard

Rule 24E requires CH₄, CO, NO₂, and O₂ will be shown on all gas placards.

WHAT IS THE EXTENT OF GAS FOR THESE PLACARDS?

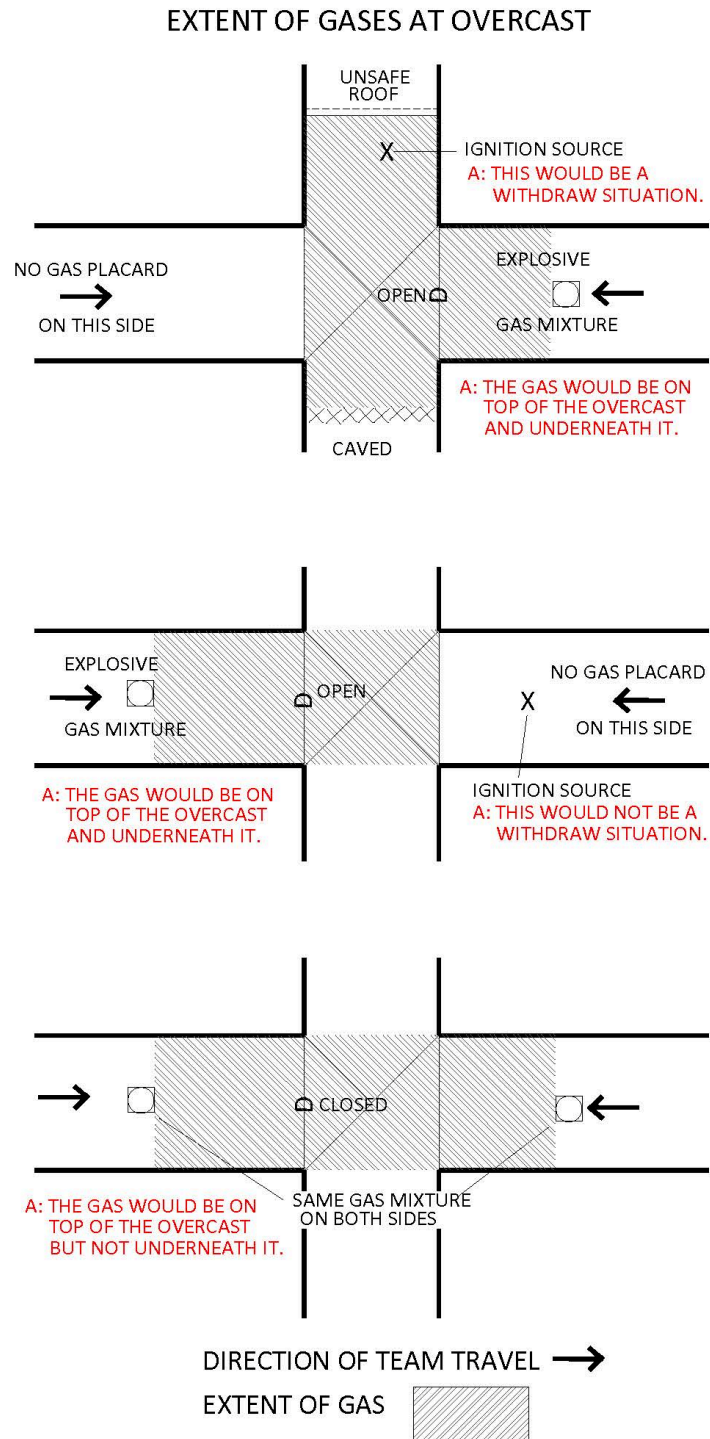
IF THE FIRST GAS ONLY EXTENDS TO THE NEXT PLACARD WHAT DO THE VALUES FOR THE NORMAL GASES TO BE CHECKED CHANGE TO?

Q125. If I travel up #2 entry and airlock through stopping on initial is low O₂ gas in #1 crosscut or would I have to travel #1 to take it into crosscut #1?



A: No for the first part and yes for the second.

Q126. Please refer to the figure below for questions regarding extent of gases at overcast.



FIRST AID

Q & A's

Q1: Will the first aid teams be 3 working members and a patient or 2 working members and a patient? The rules really don't state that anywhere.

A: See Rule 1: Guidelines and Procedures: A first aid team will consist of three members of the registered mine rescue team. The three team members are working team members, the contest officials will provide a patient.

Q2: Can the 11th edition Brady and the American heart manual be put onto the MSHA website so all teams have access to them?

A: The Brady Text and the American Heart Manuals can't be placed on MSHA's website because they are copyrighted and also they are NOT 508(c) Compliant. Anything placed on a Government Website must be 508(c) Compliant.

Q3: Can teams share manikins within the same company?

A: Yes, sharing of manikins is allowed.

Q4: On the manikin, so to clarify what are the requirements on the manikin? Recorded or not?

A: See Rule 12: **NOTE**: Teams must provide their own recording manikin.

Q5: Written Examination, Rule 10, scoring of the test will be completed by at least two qualified judges. Does this prohibit the use of a Scantron to score the test answer sheets?

A: No, but the scoring should be overseen by two qualified judges.

Q6: Will the materials list be checked?

A: No. The materials list will not be "checked" for compliance of the materials list but if a problem is designed within the scope of the list and a team doesn't have it you will be docked for not completing that procedure.

Q7: Will the first aid questions be made available to the team or is it the team's responsibility to get these on their own?

A: The written examination will consist of 15 multiple choice questions taken from the review questions and glossaries of the Eleventh Edition of Brady "Emergency Medical Responder – First on the Scene" taken from (Chapters: 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 22, 23 and 27) and the most current edition of American Heart Association BLS Student Handbook (as of January 1st of the contest year).

The 11th edition is pretty straight forward but there are several BLS out there. Can we possibly see the edition that will be used?

A: We will post the cover of the BLS Student Handbook in effect as of January 1st, 2021 with the Q & As.

Again, to make it fair to all the teams it would be nice if these could be uploaded to the mine rescue page on the MSHA Web site.

A: The Brady Text and the American Heart Manuals can't be placed on MSHA's website because they are copyrighted and also they are NOT 508(c) Compliant. Anything placed on a Government Website must be 508(c) Compliant.

Q8: Does the team have to provide a recording manikin capable of printing off the CPR Record? Or will one be provided. The answers to this question at the end of the call was a little confusing.

A: Yes, if they are planning on using them for contest purposes. See Rule 12: NOTE: Teams must provide their own recording manikin.

Q9: What is a granny knot?

A: According to Google it is a "square knot with the ends crossed the wrong way and therefore liable to slip or jam".

Q10: Rule 16: Presenter said that materials could be cleaned up after the clock was stopped. The rule doesn't address that. Is that correct?

A: Yes. See Rule 14: "The problem will end and teams will stop the timing device when all conditions have been located, and treated. The timekeeper/judge must time the problem in minutes and seconds and consult with the team upon completion of the problem to verify the time.

Q11: Rule 25: This rule refers using an oxygen mask on a patient but no tank is needed. An oxygen mask is not on the equipment list.

A: The administering of oxygen is **not** addressed in the 2021 First-Aid Rules and a skill sheet has not been provided to outline the Procedures/Critical Skills for this task. There will be no expectations while the 2021 First-Aid Rules are in place for the first aid team to administer oxygen to a patient. The Problem Designers will be advised of this interpretation of Rule #25 on page 6.

Q12: Rule 26: This rule refers to traction splints. Traction splint is not on the equipment list.

A: The Traction Splint is not on the list but as a treatment it could be used by a team if the team has the equipment. REMEMBER the list is a MINIMUM LIST only for problem designers to design problems within the scope of the list. See Rule 7: under discounts Teams will not be discounted for doing more than the problem call for, unless it is detrimental to the patient or improper care.

Q13: Rule 24: There was discussion about the statement "...with the exception of familiarization or AED and Manikin." It was discussed that the manikin can be tested under guard. It was also discussed that coal teams were previously required to run a sample tape when they arrived at the working area. If the team has to check their manikin while in lock up, something could change when it is disassembled and transported to work area and reassembled. The team should be allowed to test the manikin for operation at the working area. Also, part of the of the test tape being run under the judges supervision was to confirm that the manikin was operating properly and not rigged.

A: The rules committee agree. No practicing will be allowed on the field before the beginning of the contest, **with the exception of familiarization of AED and Mannequin**. The team will run a test tape once on their assigned contest field and before the time clock is started to ensure the operation of the manikin. A test tape shall include the team's working number and initials of the Team Captain. The AED will always be a training model with AED functions simulated, if conditions dictate the use of an AED Judges shall provide an envelope indicating a shockable or non-shockable rhythm.

If it is the latter, are we now requiring patients to take written tests too?

A: No, patients will not be taking the written exam.

Q14: Why not use Questions and answers that are in the glossary? Those questions and answers test your knowledge not your memorization.

A: The questions are not taken from a "statement of fact format" any longer but as per Rule 2 Written Examinations: The written examination will consist of 15 multiple choice questions taken from the review questions and glossaries of the Eleventh Edition of Brady "Emergency Medical Responder – First on the Scene" taken from (Chapters: 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 27) and the most current edition of American Heart Association BLS Student Handbook (as of January 1st of the contest year).

Q15: Page 6, 25 - Oxygen has never been a part of Mine Rescue treatment as far as I'm aware. The materials list does not include a mask for administering oxygen so the only route we would have would be to use our barrier device. Beyond that, what is required to "administer oxygen?" I would suggest this rule be removed to eliminate the possibility of a problem designer putting it in or a judge unfairly treating contestants who are and are not trained in the use of oxygen.

A: The administering of oxygen is not addressed in the 2021 First Aid Rules and a skill sheet has not been provided to outline the Procedures/Critical Skills for this task. There will be no expectations while the 2021 Rules are in place for the first aid team to administer oxygen to a patient. The Problem Designers will be advised of this interpretation of Rule #25 on page 6.

Q16: Page 7, Written Exam, 3 - Three team members required to take the test. Patients are not required to know any skills to tend to injured patients. To require them to know the entire content contained in EMR 11th edition AND the BLS Student manual doesn't make sense. The patient is not trained or skilled in any of the functions of a first responder or emergency medical technician. If you wanted to have it set up like Mr. Shannon indicated he "thought" it was going to be written, where only 2 tests count in the final score, that would be okay. But it still doesn't make any sense to require a patient to study the material. Some of these patients might be temporary stand ins.

A: See Rule 1 under guidelines and procedures: A first aid team will consist of three members of the registered mine rescue team. The three team members are working team members, the contest officials will provide a patient. All three Team Members will take the written. Patients will not be taking the written exam.

Q17: Page 8, Appeals, 3 - The appeals format should be the same as the other disciplines. If for no other reason, to eliminate confusion. One hour to respond after posting, and 20 minutes to appeal.

A: These are the final rules for 2021. This can be revisited next year after this season of contests.

Q18: Page 8, Appeals, 5 - Like with BG4, why would a remote protest be allowed so much more time than a guy who stayed there and waited on protest? The time should be the same.

A: **IN PERSON:** The first aid team will be notified by a posting outside the “designated location” for appeals at the contest site. The first aid team and team trainer will have thirty (30) minutes to review the judges’ scorecards, written examination scores, etc. and prepare/submit any written protests. No additional appeals will be accepted after the 30-minute time limit.

ELECTRONICALLY: The first aid team will have forty five (45) minutes to review the judges’ scorecards, written examination scores, etc. and return any written protests to support their appeal back to the Contest Officials via email.

- The 45-minute review clock starts when the team opens the email document which initiates the sending of the “read receipt” email back to the Contest Officials.
- The team then has 45 minutes to return any written protests to support their appeal back to the Contest Officials via email.
- The team has two hours from the time the results are ready for review and are posted outside the “designated location” for appeals at the contest site to open the email sent by the Contest Officials and complete their response.
- Forty five (45) minutes is the maximum allotted time for the electronic review.
- For example, if a team waits for one hour and 50 minutes once the results are posted at the contest site to open the email sent by the Contest Officials, they only have 10 minutes to complete their review and email any protests back to the Contest Officials.
- Electronic Reviews received by the Contest Officials after the 2-hour time limit or after the 45-minute review time limit will not be accepted.

Q19: Written Exam - will there be a list of 100 questions (or more) from the EMR or BLS documents that the contest organizers work from?

A: No

If so, will it be published?

A: Not applicable.

If not, how does a competitor form a protest that won't take 2 hours to validate?

A: The questions are not taken from a "statement of fact format" any longer but as per Rule 2 Written Examinations: The written examination will consist of 15 multiple choice questions taken from the review questions and glossaries of the Eleventh Edition of Brady "Emergency Medical Responder – First on the Scene" taken from Chapters: 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 22, 23 and 27 and the most current edition of American Heart Association BLS Student Handbook (as of January 1st of the contest year).

Q20: Will teams be required to purchase/provide their own recording mannequins that will print out results or can they use the old style units that don't print out?

A: See Rule 12: **NOTE:** Teams must provide their own recording manikin.

Q21: Guidelines and Procedures #1 states that a first aid team will consist of 3 members but does not mention a patient. Is the team responsible for providing a patient or will the contest provide the patient(s)?

A: No, the team will not be required to provide a patient. See Rule 1 under guidelines and procedures: A first aid team will consist of three members of the registered mine rescue team.

Q22: Guidelines and Procedures #12 states Teams must provide their own recording manikin and there is discounts outlined on score card B that would require a printout in order to assess those discounts but I do not see any rule that requires a team to print out and submit a record to the judges? How would a team be discounted for not printing out and submitting the results for CPR or AV?

A: See Rule 12: **NOTE:** Teams must provide their own recording manikin. If CPR is incorporated into the problem and the team does not provide a recording manikin to achieve a printable result it would be docked 20-discounts for not completing a skill. Without the results printed out no way to judge if CPR was completed as per the skill sheet. The results of the CPR will be printed out and given to one of the field judges with team number and captains initials.

Q23: Guidelines and Procedures #15 states that problems will be designed from the skill sheets and #25 talks about if oxygen is required it will be simulated by the use of a mask and no tank is required. I did not see a skill sheet for applying oxygen so if there is no skill sheet can a team be discounted for not using oxygen?

A: The administering of oxygen is not addressed in the 2021 First-Aid Rules and a skill sheet has not been provided to outline the Procedures/Critical Skills for this task. There will be no expectations while the 2021 First-Aid Rules are in place for the first aid team to administer oxygen to a patient. The Problem Designers will be advised of this interpretation of Rule #25 on page 6.

Q24: How will a team determine if a patient is immediate, delayed, minor or deceased by the start triage system table provided in the rules? Will the team be given a card or envelope with the information for each patient that is in the problem or will they ask the judge what are the respirations, perfusion and mental status?

A: The patient will have the results of the respirations, perfusion and mental status in the size of at least 8.5 X 11 sheet visible to the team upon approach to the victim.

Q25: Critical skill items with an asterisk. They stated during the rules training that it had to be verbalized. If verbalize the item but do not perform would I get a 2 point discount for not performing? If I did not perform and did not verbalize would I get 2 points for each or just 2 points total?

A: Rule 11 Scorecard A, (2) point discount total, failure to perform a required critical skill. Each CRITICAL SKILL shall be performed as identified on the skill sheets, 2 each infraction except for CPR/ AV covered by Scorecard B.

Q26: If I have determined that my patient is a minor patient according to the start triage guidelines would the patient be required to be placed on a backboard for transportation even though they can walk and follow commands?

A: No, unless stated in the problem.

Q27: Written Examination, Rule 1: Will the patient/bystander now be regarded as a working team member?

A: No. See Rule 1 under Guidelines and Procedures: A first aid team will consist of three members of the registered mine rescue team. The three team members are working team members, the contest officials will provide a patient.

Q28: The design of first aid problems having a CPR scenario where the patient is not revived, should have specific notice or statement to teams that the patient is deceased. Statements that the patient has no pulse does not imply to teams that CPR should stop or be discontinued and is contrary to all basic lifesaving protocol.

A: These statements on whether a patient has a pulse or not is for Problem Design and the teams to know CPR is to be started if given. If cycles of CPR are given then it is not contrary at all. This is a stopping for this portion of the contest problem and unfortunately not all patients given CPR survive.

Q29: Critical skills verbalized, acronym BP-DOC: On page 19, Initial Assessment, the note at the bottom explains the acronym as Bleeding, Pain, Deformities, Open Wounds. Will this be the accepted verbiage, or should it be Cuts or Contusions?

A: THIS NOTE IS INCOMPLETE IT SHOULD HAVE INCLUDED ***NOTE: Each critical skill identified with an asterisk (*) shall be clearly verbalized by the team as it is being conducted.** "After initially stating what BP-DOC- Bleeding, Pain, Deformities, Open wounds, **Crepitus** stands for, the team may simply state BP-DOC) This statement is correct within each of the skill sheets. The word **CREPITUS** was left out.

Q30: Score card A, Rule 23: Immediate Patient Conditions....any one or more must be present on the patients. Where can teams expect to find the presence of said conditions?

A: The patient will have the results of the respirations, perfusion and mental status in the size of at least an 8.5 X 11 sheet visible to the team upon approach to the victim(s).

Q31: During registration and drawing, will the 3rd team member be designated a team member or bystander?

A: Yes, the 3rd team member will be a team member. See Rule 1 under guidelines and procedures: A first aid team will consist of three members of the registered mine rescue team. The team will not be required to provide a patient.

Q32: Scorecard A Discounts, Rule 15: Teams shall not pad around the head and neck of the patient(s) for suspected spinal injury before the patient is placed onto the backboard. Is applying a cervical collar considered padding the neck? The critical skills for immobilization of cervical spine injury require placing the C-Collar on the patient prior to putting the patient on the backboard.

A: No, cervical collar is part of immobilizing a patient with possible cervical spine injury. See the skill sheet for IMMOBILIZATION OF CERVICAL SPINE.

Q33: According to mine rescue rules, I can still list 10 people on my mine rescue team at registration then under Rule 1 on first aid it mentions members of the 8 registered mine rescue members. I understand that each team must carry a minimum of 8 members now but if a team carries 10 members will the first aid or Team Techs be able to be pulled out of the 10 registered members?

A: See Rule 1 under Guidelines and Procedures: A first aid team will consist of three members of the registered mine rescue team. The team will not be required to provide a patient.

Q34: Page 5, #12 Under B says - NOTE: Teams must provide their own recording manikin. Does the team have to purchase a recording manikin? Does this mean that every team must bring their own manikin, whether it mean Annie, or another 1/2 manikin, or recording manikin?

A: See Rule 12: **NOTE:** Teams must provide their own recording manikin.

Q35: Page 6, #24 says that one can get familiar with the AED and Manikin. If you bring your own, it should reference to get familiar with it in lock up.

A: No practicing will be allowed on the field before the beginning of the contest, **with the exception of familiarization of AED and Mannequin.** The team will run a test tape once on their assigned contest field and before the time clock is started to ensure the operation of the manikin. A test tape shall include the team's working number and initials of the Team Captain. The AED will always be a training model with AED functions simulated, if conditions dictate the use of an AED. Judges shall provide an envelope indicating a shockable or non-shockable rhythm.

Q36: Do we need to bring our own AED?

A: Yes, the AED is listed under the minimum equipment required for a team to have to ensure patient(s) can be treated.

Q37: When item one (1) was covered under guidelines and procedures, it referenced the team would consist of a three member team, versus our previous understanding of two working members. Does this guidance reflect a patient provided from our group, or is this a three (3) man working team? We saw the reference later that a patient might be provided in lieu of the use of moulage to be more realistic and we understand and appreciate that, but did want to clarify if the third member was indeed a working first aid member or not.

A: No, the patient will be provided by the contest officials or persons responsible for the contest. See Rule 1 under Guidelines and Procedures: A first aid team will consist of three members of the registered mine rescue team.

Q38: Does a mannequin with a feedback device work for CPR instead of a recording mannequin? The old recording mannequins that print out are not available or supported for purchase.

A: See Rule 12: **NOTE:** Teams must provide their own recording manikin.

Q39: Rule 3 pg. 1-2 first aid teams must at a minimum furnish the basic material list. There is no recording manikin listed on the material list, so manikin are not required for this year's nationals is this correct?

A: It is not included in the recommended equipment list but it is in the rules that it is required. See Rule 12: **NOTE:** Teams must provide their own recording manikin.

Q40: If companies are unable to purchase two manikins (one per team), two computers or two tablets, and two printers will teams still be allowed to compete in first-aid at nationals?

A: Yes, teams can share manikins. If no manikin at all then no team will be turned away but (20) discounts will be added for not completing the procedure of CPR, if included in the problem design.

Q41: Where are all the digital electronic devices kept now to ensure the integrity of the contest?

A: The team members can store them anywhere they want to, EXCEPT on the person(s) while in lock-up or while competing on the first-aid field where they are competing.

Q42. Can you tell me please how many working team members are on the first aid team? Is it the traditional 2 and a patient? Which means the patient would have to take the written exam. According to the new rules there are 3 working team members.

A: See Rule 1 under Guidelines and Procedures: A first aid team will consist of three members of the registered mine rescue team. The team will not be required to provide a patient and patients will not be required to take the written test for First-Aid.

Q43. Page 2, Rule 3 C, Page 3, Rule 4 C, Page 13 Rule 16 – Mask/face shield, does the mask need to be medical grade, surgical or can it be a fabric mask?

A: Must meet CDC guidelines for Mask requirements. Taken from the recommended equipment list: Mask/face shields or masks and goggles combination meeting blood borne pathogen requirements.

Can a neck-gator be used as a mask?

A: No, should meet CDC guidelines.

Do safety glasses adequately substitute for a face shield or goggles?

A: No

Q44. Page 5, Rule 12 B – which recording CPR manikin is recommended?

A: See Rule 12: **NOTE:** Teams must provide their own recording manikin. Per the rule, it only reads that it is to be a recording CPR manikin. No particular brand is required.

Q45. Page 13 Rule 8 – in preparation for the first aid station, our team members put several strips of tape on our shirts and pants in order to have it readily available when working the problem. Will our team be assessed this discount?

A: Yes, as per Rule 8 from Scorecard A discounts: The team's material and equipment (jump kits, splints, etc.) may not be assembled or donned (excluding BSI) until after the timing device is started.

Q46. Guidelines and Procedures

12. Teams must provide their own recording manikin. Does this mean any recording manikin or is there a minimum requirement?

A: See Rule 12: **NOTE:** Teams must provide their own recording manikin. Per the rule, it only reads that it is to be a recording CPR manikin. No particular brand is required.

Q47. There seems to be some confusion on which material changes. Is it only the AHA BLS Student Handbook?

A: Yes. The rule is found in Guidelines and Procedures Rule 23 states: The Eleventh Edition of Brady "Emergency Medical Responder – First on the Scene" (Chapters: 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 27) and the current American Heart Association BLS Student Handbook (as of January 1st of the contest year) are authorized for reference and guidance.

Q48. Appeals: When not using electronic review the team has 30 minutes. If using electronic review process the team will have 45 minutes to review upon the "read receipt" of the email, but no more than two hours from the time it was posted. If a team does not reply to the "read receipt" request they would have two hours as opposed to 45 minutes. If delivery request is used, the sender would have a notification of delivery even if the team fails to send a "read receipt" back. Electronic may be the way to go from a team perspective.

A: **IN PERSON:** The first aid team will be notified by a posting outside the "designated location" for appeals at the contest site. The first aid team and team trainer will have thirty (30) minutes to review the judges' scorecards, written examination scores, etc. and prepare/submit any written protests. No additional appeals will be accepted after the 30-minute time limit.

ELECTRONICALLY: The first aid team will have forty five (45) minutes to review the judges' scorecards, written examination scores, etc. and return any written protests to support their appeal back to the Contest Officials via email.

- The 45-minute review clock starts when the team opens the email document which initiates the sending of the "read receipt" email back to the Contest Officials.
- The team then has 45 minutes to return any written protests to support their appeal back to the Contest Officials via email.
- The team has two hours from the time the results are ready for review and are posted outside the "designated location" for appeals at the contest site to open the email sent by the Contest Officials and complete their response.

- Forty five (45) minutes is the maximum allotted time for the electronic review.
- For example, if a team waits for one hour and 50 minutes once the results are posted at the contest site to open the email sent by the Contest Officials, they only have 10 minutes to complete their review and email any protests back to the Contest Officials.
- Electronic Reviews received by the Contest Officials after the 2-hour time limit or after the 45-minute review time limit will not be accepted.

Q49. There are some big differences with respect to how MNM teams competed, especially in the verbalization of the skill sheets. Coal did a judges training video some time back that highlighted some of the verbalization using a team working an actual problem. Is it possible to have access to that type of information for our MNM teams seeking to be competitive?

A: Yes. The committee will look into this and if it is available, we will attempt to get it on the website.

BENCH

Q & A's

Q1: How many multiple choice answers will there be for each question on the written test?

A: Three

Q2: Will contestants be allowed to use their “written record” as a basis for appeal if the judges have discounted the contestant for failure to conduct a test?

A: Yes

Q3: Bench-BG 4/Visuals/Disassembled: Many of the instructions beneath the rules say that the contestants will verbally identify condition or means of testing a component. This should be removed to avoid confusing new contestants.

A: Those statements beneath the rules were left in for training purposes to show what would be expected to do a proper exam on that particular part. If the verbally identify part causes confusion this year we will have to remove that next year. The current rules have already been approved for this year.

Q4: Written record/Judges Scorecard: It would be prudent and helpful to the judges to add the word Alternative to #11 on the written record.

A: Very good suggestion. The judge’s checklist is currently being put together and we will make that change to the judge’s checklist. The judge’s checklist will be available on MSHA.GOV under Bench Designers resources when completed. However this change will not be reflected in the rules for this year as they are already approved as is.

Q5: (BG4) According to rule 4 as it states, a contestant can work an entire problem and have it zeroed until the very end and time out during the last or next to last test on the test apparatus and another contestant can miss several on the visual and end up with 35 discounts on the visual and miss 4 on the written test and still win the competition due to this change in this one rule?

A: Rule number 4 would not apply in this scenario. Rule number 4 only applies if the contestant knowingly continues on without correcting a predetermined problem to try to minimize discounts before running out of time.

Q6: Would a contestant be discounted for saying "hand tight connection" out of habit as opposed to "connected or good"?

A: No. Under B. Miscellaneous Rule number 5 it says any similar terminology used to describe a part is acceptable. Similar terminology for a connection is acceptable. Be sure to verbally identify something similar to connected or good when making the required connections.

Q7: Written Exam: Teams will develop a bank of questions as they go to contest and take test. The more contest a team goes to the quicker they will get the questions that are in the bank. The more teams a company has that goes to contest across the country the sooner they will have the bank of questions because they will share. It is unfair to a small company that only goes to a few contest and don't have other teams to share test questions with. By the time the Nationals gets here some teams will have most of the questions while others will have very few. What's fair about that? And what about leaks? It would be a shame for the National Championship benchman to be determined by one benchman that had access to the "Bank of Questions" and the other that didn't.

A: The bank of questions are taken from the Manufacturers manuals that are referenced in the rules. Every Team Member has equal opportunity to study those manuals. We are asking the local contests to not release the tests to the contestants after the contest. The only time the contestant should see the test is while they are taking the test and when they come in for appeals. They will not receive it in their completed packet following the contest. We cannot control how many Teams a company has or how many contests they attend. The Chief Judge is the only one with access to the questions.

Q8: Can you please re-do this presentation from the perspective of M/NM? This entire presentation was in reference to the former coal rules and any changes made from the previous coal side. The other half of listeners do not benefit when using previous coal rules as a reference for “no changes” etc.

A: We obviously cannot redo the presentation. This presentation was done in reference to the former Coal rules because those are basically the rules that were used as a starting point for the combined rules and they were modified to include the changes that were implemented to create the finished rules. The new rules follow the format of using two apparatuses which is what the old Coal rules used. The Bench Committee worked very hard with equal representation from both sides to come up with a fair and impartial set of rules to produce the most effective training possible. We apologize for any thoughts or feelings of partiality for one side or the other. That is not the intention of the Bench Committee in any way.

Q9: Will the serial # on the apparatus come from the top of the pressure reducer or the top of the apparatus? The serial numbers are the same until you change the pressure reducer at 6 years and then they no longer match. Which one will they use in the contest?

A: The one on top of the apparatus.

Q10: Page 1, Rule 4, Simulating defogging the lens, adding dragersorb, and adding ice, the rule does not say anything about verbalizing this. Mr. Leverknight stated in his discussion on the rules meeting during the BG4 component that this must be stated. In the 240 discussion, it was only stated that this must be simulated. There was no mention of verbalization. Does the contestant have to verbalize "I'm simulating defogging the lens here, adding dragersorb, and adding ice Mr. Judge" or can it be simulated by taking the antifog or provided ice pack and holding it over the facemask and cooler?

A: You need to verbalize and you have to pick up the items. If you don't verbalize or pick the Item up you will be discounted as not preforming.

Q11: Page 3, Rule 7, having the contestant fill out the examination worksheet is going to cause problems with this contest. The purpose of this contest is to ensure that benchmen are capable of identifying all of the parts in a SCBA and that they know what those parts do, so they can quickly and efficiently build an apparatus or repair an apparatus that a man/woman can trust their life to. Not that he can memorize what a check sheet looks like and legibly write out numbers on paper. I feel this part of the contest is going to negatively impact the results of a competition.

A: This is the rule for 2021.

Q12: Page 4, A, 1 Written Exam - So because of M/NM protest, we've thrown out the statements of fact. In its place, the benchmen are going to be expected to read and basically memorize the User Manual for their apparatus. Then someone is going to build 100 questions that the contestants will never see outside of competition? How is a contestant supposed to be able to know if his answers are correct when they receive a dock for a missed question during protest? How is a contestant supposed to protest a dock if they don't know what the questions and answers are? The questions and answers should be published just like the statements were before. Again, the purpose of the bench contest is not to see who can memorize a book but who can most efficiently build or repair an apparatus that a miner can depend on in a life or death situation.

A: Contestant will review during appeals. This is the rule for 2021.

Q13: Page 5, B, Miscellaneous, 3 - Why should a contestant that is reviewing his results for protest online be given any more time (20min vs 45min) to formulate his protest? By the same token, why should he get an extra hour to respond to his call to review? I understand if teams go home due to Covid or similar instances they might need to be monitored. But if this is done at Nationals, everyone should still be local. If the 45min/2hours is legitimate, give the same amount of time to the guy that stood in line and waited for his protest.

A: **IN PERSON:** Within one hour of notification, the bench participant and team trainer shall report to the “designated location” for appeals at the contest site. They will have twenty (20) minutes to review the judges’ scorecards, the written examination score, etc. and prepare/submit any written protests. No additional appeals will be accepted after the 20-minute time limit.

ELECTRONICALLY: The bench participant will have forty five (45) minutes to review the judges’ scorecards, the written examination score, etc. and return any written protests to support their appeal back to the Contest Officials via email.

- The 45-minute review clock starts when the bench participant opens the email document which initiates the sending of the “read receipt” email back to the Contest Officials.
- The bench participant then has 45 minutes to return any written protests to support their appeal back to the Contest Officials via email.
- The bench participant has two hours from the time the results are ready for review and are posted outside the “designated location” for appeals at the contest site to open the email sent by the Contest Officials and complete their response.
- Forty five (45) minutes is the maximum allotted time for the electronic review.
- For example, if the bench participant waits for one hour and 50 minutes once the results are posted at the contest site to open the email sent by the Contest Officials, he/she will only have 10 minutes to complete their review and email any protests back to the Contest Officials.
- Electronic Reviews received by the Contest Officials after the 2-hour time limit or after the 45-minute review time limit will not be accepted.

Q14: Page 7, C, 4 - Cut and run. The language below the rule indicates there is a pending 5 point discount for not correcting the problem. This 5 point dock is detailed in rule 3. The language opens up the possibility to get double dipped on the 5. Inexperienced judges might end up unfairly penalizing someone for this.

A: This is the rule for 2021.

Q15: Making a hand tight connection has been removed from the language. For those connections, can the same terminology still be used in competition? If a contestant places the drain valve into the breathing bag and states, "making a hand tight connection" will he be docked because he didn't say "connection is good?"

A: No

Q16: Judge's score card 6 and 11 are both the relief valve tests. I understand it's there because the contestant can do it either way. The problem is, if an inexperienced judge has this scorecard, and we often have inexperienced judges, a contestant that does a full test and zeros the problem but doesn't state the relief valve twice he might get docked. I would propose language added to the score card to clarify it can be done either time or one of the relief valves be removed. It was stated in the discussion by Mr. Leverknight but that won't be admissible in protest at a local contest.

A: When the contestant fills out the written record, the judge will know when the test will be performed.

Q17: Page 9, D, 1 - Check sentence structure. Should the first comma have been a period?

A: Yes

Q18: I also have a BG-4 question and I'm not sure who can answer it. They said the questions for the written would be taken from the BG-4 owner's manual. Is BG4 Edition 9 April 2020 IFU the correct edition that I should be studying?

A: Drager's User Manual Revision 1 November 2016. A link for the manual will be located on Holmes Mine Rescue Association's website.

<https://www.holmessafety.org/holmes-mine-rescue-association-rules-and-contest-resources/>

Q19: How many letters are acceptable for abbreviation for the bg-4 score card/written record, is one letter ok? (Example) L for low pressure warning test, I for inhalation valve test?

A: No, Rule #7 page 3, Low pressure warning test or LPWT, Inhalation Valve Test or IVT, Exhalation Valve Test or EVT and so on.

Q20: Does the date, SS #, signature, cylinder reading have to be at the end of the score card, like it shows on pg. 19 or can you change the order and have these readings done at the top of the score card?

A: Page 19 is for the judges if the contestant wants to start with the Date, SS# signature and cylinder reading, that's fine, date and signature are done after the clock is stopped. The Test must be in the order as shown on page 19 Judges written record.

Q21: Rule 6 pg. 8 all connections must be tightened and verbally identified, is this for both of the apparatuses (assembled/disassembled)?

A: No, this is for the disassembled apparatus only.

Q22: Would you happen to have the link for the “BG4 Drager Instructions for Use manual for the PSS BG4 Ap/Cp. Rev 1, Nov 16”? This is the latest revision of this user manual and is used for the Bench Written test. In the Rules it says it can be found on the MSHA site but I am unable to locate this material.

A: MSHA cannot add the manuals to the MSHA website because they are copyrighted and aren't 508(c) complaint and anything on a Govt. Website must be 508(c) Complaint. The Manuals referenced in the rules will be posted on the Holmes Mine Rescue Association's Website.

<https://www.holmessafety.org/holmes-mine-rescue-association-rules-and-contest-resources>

TEAM TECHNICIAN

Q & A's

Q1. Will teams be able to calibrate their detectors with a competition known gas to all be on the same playing field with the other team's detectors prior to going on the field?

A: No. The instruments should be calibrated with the gas mixture recommended by the instrument manufacturer.

Q2. Do the pre-registered technician team members have to be certified by the state of which the mine they represent is located?

A: No. There is no certification requirement for the Technician Team members.

Q3. We currently have Drager 2000 and 5000 multi gas detectors, under the new rules are we going to have to purchase the Drager 8000's or the iBrid's to compete in the competition.

A: The MX6 iBrid Multi-Gas Monitor and the Drager X-am 8000 (pending approval) are the only two instruments designated for use in the benching portion of the contest.

Q4. The new rules state that the mine rescue teams currently have 8 people on a team. We currently have only 6 people on our team complying with the 30CFR. Is the technician part of the competition mandatory or optional?

A: The Technician Team competition is not mandatory, but is required to be eligible for the Combination Award.

Q5. Is the contestant allowed to use the small digital anemometer? The reason I ask is because they were allowed in the pre-shift completion.

A: No. The Technician Team competition is designed for use of a vane anemometer.

Q6. Does the large wheeled anemometer have to be in calibration date? A lot of the contestants would use the digital one because it can't be calibrated. I know that we would allow some of the equipment requirements to be out of date or practice/test models in past contests.

A: There isn't any requirement in the rules to check the calibration of the anemometer.

Q7. Will the bugged detector provided by the contest be the same type detector that the teams uses?

A: The Technician Team will declare the MX6 iBrid Multi-Gas Monitor or the Drager X-am 8000 (pending approval) to be used in the contest at the time of registration.

Q8. For the gases required for the detectors. The CH₄ does not specify the range of that gas to have on the detector. Is it low range or high range or are both ranges required?

A: The multi-gas instruments used for the Technician Team contest must comply with 30 CFR 49.6(a)(6) and 30 CFR 49.16(a)(6), requiring methane to be measured from 0.0 percent to 100 percent of volume.

Q9. Do we have to use a regular anemometer or can we use a multi directional digital anemometer?

A: The Technician Team competition is designed for use of a vane anemometer.

Q10. Technician Team Rules, Page 8, Rule 5. The last sentence says that there are 4 gases to test for; Oxygen, Methane, Carbon Monoxide, Nitrogen Dioxide. However, the rule references 30 CFR sections 49.16(a)(6) and 49.6(a)(6) and those regulations do not include Nitrogen Dioxide. So our iBrid spotters are not set up for NO₂. They meet the mine rescue regulation requirements for Methane, Oxygen and Carbon Monoxide. What should we do?

A: For contest purposes, multi-gas instruments used by the teams during the field and technician team competitions must meet the requirements of 30 CFR 49.6(a)(6) and 30 CFR 49.16(a)(6) and report all required concentrations within acceptable limits for O₂, CH₄, CO and NO₂.

Q11. For the smoke tube times, do we give the card with the time immediately once smoke is sent or after the contestant counts to the time listed on the card?

A: The contest judge will provide the information to the contestant after the allotted time.

Q12. What sensors are going to be required to be installed in the detectors for team tech and mine rescue?

A: For contest purposes, multi-gas instruments used by the teams during the field and technician team competitions must meet the requirements of 30 CFR 49.6(a)(6) and 30 CFR 49.16(a)(6) and report all required concentrations within acceptable limits for O₂, CH₄, CO and NO₂.

Q13. Does the multi gas detector that the team brings, need to be an iBrid MX6 or can it be a different detector?

A: For contest purposes, multi-gas instruments used by the teams during the field and technician team competitions must meet the requirements of 30 CFR 49.6(a)(6) and 30 CFR 49.16(a)(6) and report all required concentrations within acceptable limits for O₂, CH₄, CO and NO₂.

Q14. What is the range of gases that is needed for the team's multi gas detector?

A: For contest purposes, multi-gas instruments used by the teams during the field and technician team competitions must meet the requirements of 30 CFR 49.6(a)(6) and 30 CFR 49.16(a)(6) and report all required concentrations within acceptable limits for O₂, CH₄, CO and NO₂.

Q15. The equipment needed for the air reading with an anemometer included a "simple" calculator, but page 16 reads that air readings be calculated with a pencil or pen. Can the air reading with an anemometer be calculated with a calculator?

A: A "simple" calculator may be used to calculate air measurements.

Q16. Are the worksheets for the air readings going to be provided or should the team bring their own?

A: The Air Calculation Worksheet will be provided to the contestant.

Q17. Will a 1-inch magnehelic work for all team tech measurements?

A: The magnehelic gauge scale is not specified in the Technician Team rules.

Q18. Does the registering team technician designate a preference as to what model and manufacturer test instrument will be benched?

A: The Technician Team will declare the MX6 iBrid Multi-Gas Monitor or the Drager X-am 8000 (pending approval) to be used in the contest at the time of registration.

Q19. Page 6 No. 2 of the Written Exam Portion mentions “questions may also be taken from the checking and testing procedures for the Dräger X-am 8000 & MX6 iBrid.” Could this be specified as to where the questions can be taken from as the manual for the iBrid MX6 does not specify “Checking or Testing Procedures.” In their manual.

A: The questions for the Technician Team Written Examination regarding the “checking and testing procedures” for the multi-gas detectors will be taken from the procedures outlined on Page 10 (MX6 iBrid) and Page 11 (Dräger X-am 8000* pending MSHA approval) of the 2021 Technician Team Rules. The team members will only be tested on the procedures for the specific multi-gas detector declared by the team at registration.

Q20. The Gas detection instrument that will have to be benched and will possible have defects, will that only be a Dräger X or an iBrid? Or will they take one like we use (which is an Altair 5X) and put defects in it? Just curious if we have to study and get one of the other spotters, which we do not use, to work with to be able to be familiar with to be able to compete.

A: The MX6 iBrid Multi-Gas Monitor and the Dräger X-am 8000 (pending approval) are the only two instruments designated for use in the benching portion of the contest. The contestants will declare the unit to be used at time of registration.

Q21. On the magnehelic gauge, does it matter the readings on the one the team has since it will only be used to simulate readings? We have several with different gauges to read different levels of pressure readings. Also does the gauge have to be able to read negative pressure that we use to simulate with?

A: The magnehelic gauge scale is not specified in the Technician Team rules. The contestant will state the correct reading of the magnehelic to the judge and will include positive or negative pressure in the explanation.

Q22. On the air readings, does it matter if the team has a high or low speed anemometer? Does the inspection date on the one the team uses for the contest matter?

A: The Technician Team competition is designed for use of a vane anemometer, as illustrated in the Rules. There isn't any requirement in the rules to check the calibration of the anemometer.

Q23. Can a digital anemometer be used?

A: The Technician Team competition is designed for use of a vane anemometer.

Q24. Rule 7 page 9 states “Twenty (20) discount points per alarm point will be assessed for any incorrectly set alarms.” What are the correct “set alarms” or where can they be found?

A:

Alarm	Gas	O2	CH4	CO	NO2
Points	Low	19.5 %	1 %	50 ppm	3 ppm
Req'd	High	23.5 %	1.5 %	100 ppm	5 ppm

Q25. Rule 8 page 9 states “Twenty (20) discount points will be assessed for each instance of incorrect procedure or equipment use during calibration.” Are the correct procedures in writing somewhere and if so can we include them somehow?

A: The procedures and equipment are in writing in the manuals for the Gas Detectors. The Manuals for the Gas Detectors cannot be placed on MSHA’s website because they are copyrighted and also they are NOT 508 (c) Complaint. Anything placed on a Government Website must be 508 (c) Compliant. The manuals are available on each gas detector are available on their website or from their representatives.

Q26. Why included the Draeger X-am 8000 in the rules for 2021 when the product is not yet approved? A non-approved multi-gas detector is not likely to be a product owned by any mine rescue team or their company. To use it would require any team to go out and buy those detectors. Without approval, it wouldn't make any sense to purchase it. It would make more sense to include the 5000 version or something else that already is approved and in circulation. The end result will likely be all teams just using the MX6.

A: The MX6 iBrid Multi-Gas Monitor and the Draeger X-am 8000 (pending approval) are the only two instruments designated for use in the benching portion of the contest. The contestants will declare the unit to be used at time of registration.

Q27. Which magnehelic gauge will be required for that portion of the competition? Specifically, what pressure range will be needed or will it even be considered as part of the equipment or competition since the readings will be simulated?

A: The magnehelic gauge scale is not specified in the Technician Team rules.

Q28. For the written test, can the specific documents for available gas detectors be made available with the rules and training information found on the msha.gov website? That way no team ends up with an older or newer version of the manuals provided with the Draeger or Industrial Scientific gas detectors?

A: The questions for the Technician Team Written Examination regarding the “checking and testing procedures” for the multi-gas detectors will be taken from the procedures outlined on Page 10 (MX6 iBrid) and Page 11 (Dräger X-am 8000* pending MSHA approval) of the 2021 Technician Team Rules. The team members will only be tested on the procedures for the specific multi-gas detector declared by the team at registration.

The link for the Multi-gas detector manuals will be located on Holmes Mine Rescue Association’s website <https://www.holmessafety.org/holmes-mine-rescue-association-rules-and-contest-resources/>

Q29. In the paragraph labeled **Example:** on page 13 where does the example stop and the description of the competition start? If a contestant was to memorize the paragraph listed, where does he stop his description of the anemometer?

A: The contestant is required to give a brief description of how an anemometer functions. Memorization of the rules is not a requirement.

Q30. In the explanation of how to take an anemometer reading each rule has the statement "Failure to will be discounted by the applicable rule." This is immediately followed by "Contestant failing to will receive one discount." Are there other applicable rules or are all of these 1 discount for failure to complete properly?

A: The applicable discounts are as stated in the Rules.

Q31. Under General Rules #11; what is meant by “complete with team number”? Is this the working order number or team member number?

A: Team member number, as specified in the 2021 Unified Mine Rescue Rules stating “Each member shall wear a different number, from one to ten, on the arm,

at or near the shoulder. Any means of affixing legible numbers on the sleeve of the uniform will be acceptable.”

Q32. MSHA requires a gas sampling certification card?

A: There is no certification requirement for the Technician Team members.

Q33. For the Magnehelic gauge, what is the recommend pressure or range for these instruments? There are many different ones out there that measure different amounts. Is there a certain type or model required? Will a Fluke 922 Airflow Meter work?

A: The magnehelic gauge scale is not specified in the Technician Team rules. A schematic of the magnehelic gauge is provided in the Rules.

Q34. During the Tech team event while the team members are benching the spotter can an electric screwdriver be used?

A: The Technician Team will be provided the needed supplies and equipment to perform the benching portion of the multi-gas instrument.

Q35. What will be the conversion for air readings that are between correction factors? Example: The air reading is 1700 FPM which is right between correction factors. Would -50, -55 or -60 be the correction factor?

A: The air management exercise is designed to develop the team members’ skills and proficiency of understanding the proper methods and procedures for taking air measurements. For the 2021 Technician Team contest purposes, the Problem Designers will be instructed to incorporate only the air measurement readings indicated on the anemometer that correspond to actual listed correction factors. The contestants will not be required to do any type of mathematical calculations to determine the correction factor that falls between two correction factors for a particular air reading.

However, to answer the question -- The proper correction factor would be determined by interpolation. In the example given for a reading of 1,700 fpm, (1800 fpm-1600 fpm = 200 fpm and correction (-60-(-50) = -10 correction). Interpolation requires -10 correction/200 fpm = -0.05 correction/fpm. Applying the correction, (1,700 fpm - 1,600 fpm = 100 fpm x -0.05 corr./fpm = -5 + (-50) = -55 correction.

Q36. Will the team member taking the air readings be required to take the written MX6 test?

A: Both team members will be required to take the written examination. The team members will only be tested on the procedures for the specific multi-gas detector declared by the team at registration.

Q37. Magnehelic Gauge: Can you provide an example of how to use the magnehelic with respect to a regulator or stopping. We have some experience with using a pitot tube in a scrubber duct but the tech problem incorporates something different than what some of us are experienced with. Since we don't have the option of not doing the magnehelic part of the tech team, could you provide more detailed guidance on what is expected?

A: The Magnehelic gauge readings taken at a regulator or seal are positive or negative pressure readings and should follow manufacturer recommendations:

Positive Pressure: Connect tubing from source of pressure to either of the two high pressure ports of the magnehelic. Plug the port not used. Vent one or both low pressure ports to atmosphere.

Negative Pressure: Connect tubing from source of vacuum or negative pressure to either of the two low pressure ports of the magnehelic. Plug the port not used. Vent one or both high pressure ports to atmosphere.

Q38. With the smoke tube, will the contestant be required to verbalize he/she is in the middle of each quadrant? Example, for an entry 10 feet wide and 6 feet high, will we be required to verbalize or measure 2.5 feet off the rib and 1.5 feet from the roof for the location or will non-verbal estimation be acceptable provided the smoke is simulated in the required approximate locations?

A: The Contestant should simulate the actions needed to sample each quadrant and verbalize the steps being taken during the process.

Q39. Could you further explain the differences and the options for the Appeals Process?

A: Technician Team appeals can be done by one of the following methods:

IN PERSON: The technician team will be notified by a posting outside the "designated location" for appeals at the contest site. The technician team and team trainer will have twenty (20) minutes to review the judges' scorecards, written examination scores, etc. and prepare/submit any written protests. No additional appeals will be accepted after the 20-minute time limit.

ELECTRONICALLY: The technician team will have forty five (45) minutes to review the judges' scorecards, written examination scores, etc. and return any written protests to support their appeal back to the Contest Officials via email.

- The 45-minute review clock starts when the team opens the email document which initiates the sending of the "read receipt" email back to the Contest Officials.
- The team then has 45 minutes to return any written protests to support their appeal back to the Contest Officials via email.
- The team has two hours from the time the results are ready for review and are posted outside the "designated location" for appeals at the contest site to open the email sent by the Contest Officials and complete their response.
- Forty five (45) minutes is the maximum allotted time for the electronic review.
- For example, if a team waits for one hour and 50 minutes once the results are posted at the contest site to open the email sent by the Contest Officials, they only have 10 minutes to complete their review and email any protests back to the Contest Officials.
- Electronic Reviews received by the Contest Officials after the 2-hour time limit or after the 45-minute review time limit will not be accepted.