2021 WKMI



2021 WKMI MINE RESCUE CONTEST SUPERINTENDENT STATEMENT

Thank you for coming out to our call for help. You are located at the FAB of the WKMI #2 mine. At 5:30 am this morning, we had an event that disrupted ventilation and caused damage to our exhaust fan. We are working to restore the fan and will inform the tram when we have it fixed. The WKMI #2 mine is a single unit mine mining in virgin coal. At the time of the event, we had seven miners working underground. All are unaccounted for and could not be contacted by the mine communication system. Under normal mining, conditions intake air travels in the #1 and #2 entries and out the #3 entry. We have had problems with methane, bad roof, and ribs at this mine. We would like your team to help us locate the missing miners.

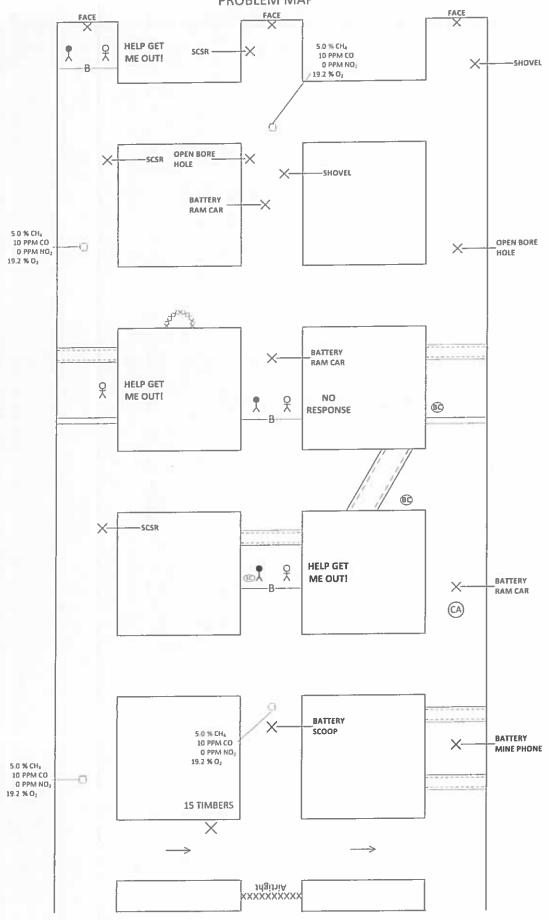
All State and Federal agencies have been notified and are onsite as well as additional mine rescue teams to serve as backup. This is all the information that I have at this time.

Thanks and good luck!!

2021 WKMI PROBLEM / WRITTEN INSTRUCTIONS

- Explore all areas of the mine that can be done safely
- Account for all missing miners
- Bring all survivors to the FAB
- The fan can be turned on and off if requested by the team
- The fan cannot be stalled or reversed
- You have 120 minutes to complete this problem

2021 WKMI PROBLEM MAP



2021 WKMI MINE RESCUE CONTEST JUDGES BRIEFING

Number 1. entry GT the opening

Number 2. entry GT the opening

Number 3. entry GT, DI, & RR the unsafe roof

Teams will travel up the number one or two entry

Team Stop One

> Crosscut between the #1 & #2 entries GT

➤ Inby GT

Team Stop Two

- > Crosscut between the #2 & #3 entries GT
- > Inby GT & DI at the barricade
- ➤ Outby GT tying back

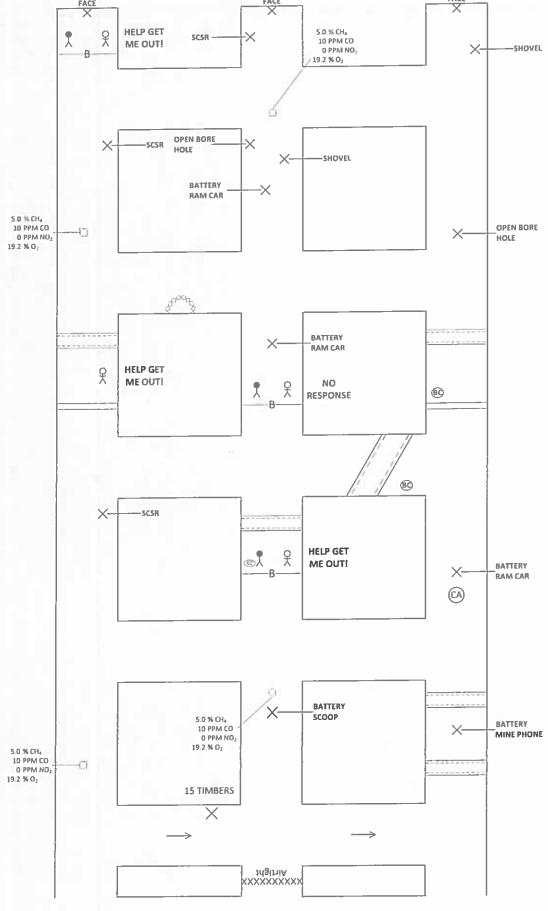
Team Stop Three

- ➤ Inby GT
- > Outby GT, DI, & RR at the unsafe roof

Team Stop Four

- > Crosscut between the #1 & #2 entries GT
- > GT & DI at the stopping

2021 WKMI **PROBLEM MAP** 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ 19.2 % O₂



Team Stop Five

- > Inby GT & DI at the barricade
- > Outby RR, DI & GT at the unsafe roof
- ➤ Crosscut between the #2 & #3 entries GT, DI, & RR at the angle unsafe roof
- ➤ Teams have timbers so they can timber through the unsafe roof outby then RR, DI & touch the patient and touch the body

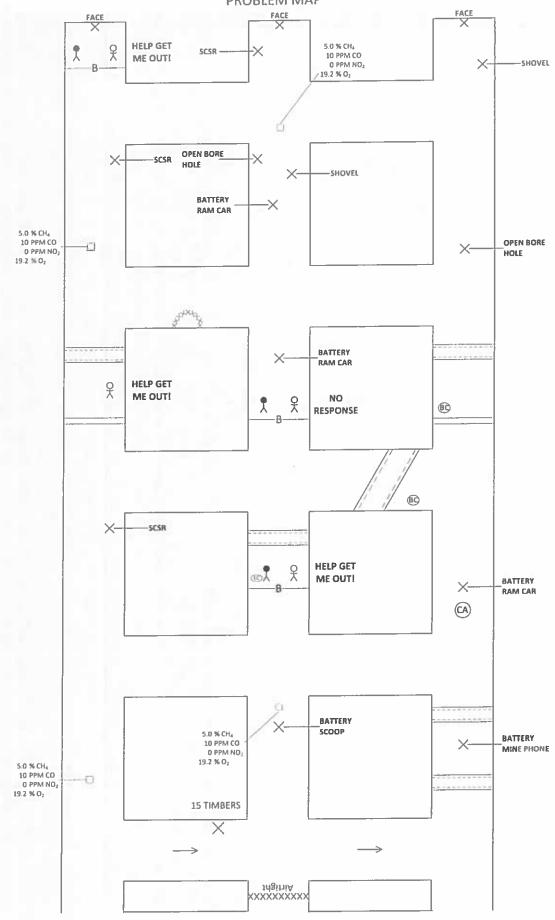
Team Stop Six

- ➤ Inby DI & GT stopping
- > Teams will have to build here and make the area behind the stopping and get the BC's to ventilate
- ➤ Crosscut between the #2 & #3 entries GT, DI, & RR the angle unsafe roof
- ➤ Teams must now ventilate the stopping in the #1 entry

First Ventilation

- > Airlock to enter the stopping
- ➤ Stopping GT
- ➤ Patient Touch, Assess & DI
- > GT, DI, & RR at the unsafe roof
- > Take Patient to the FAB
- > Teams now can ventilate the second barricade in the #2 entry

2021 WKMI PROBLEM MAP



Second Ventilation

- > The team will need to remove the gas in front of the barricade
- > Airlock to enter the barricade
- > Entering the barricade GT
- ➤ Patient Touch, assess & DI
- ➤ Body Touch & DI
- > Take the patient to FAB

Team Stop Seven

- ➤ Inby GT
- ➤ Crosscut between the #1 & #2 entries GT, & Zig Zag RR at caved area
- > Crosscut between the #2 & #3 entries GT

Team Stop Eight

- > Team can travel to #1 or #3 entry
- ➤ Inby GT
- ➤ Outby RR, GT & DI at the unsafe roof

Team Stop Nine

- ➤ Inby GT
- > Outby GT, DI & RR at the unsafe roof

Team Stop Ten

- > Inby GT & DI at the barricade
- > Crosscut between the #2 & #3 entries GT

2021 WKMI **PROBLEM MAP** FACE FACE 5.0 % CH₄ 10 PPM CO 0 PPM NO₃ HELP GET ¥ SCSR ME OUT! -SHOVEL B / 19.2 % O₂ OPEN BORE -SCSR HOLE -SHOVEL BATTERY RAM CAR 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ OPEN BORE HOLE 19.2 % Oz STAXAFE BATTERY RAM CAR **HELP GET** ME OUT! NO **B** RESPONSE **B**C) -SCSR **HELP GET** (E) ME OUT! BATTERY RAM CAR (CA) BATTERY 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ 19.2 % O₂ SCOOP BATTERY MINE PHONE 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ 19.2 % O₂ 15 TIMBERS

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Team Stop Eleven

- ➤ Inby RR, DI & GT at the face
- ➤ Outby GT
- > Crosscut between the #2 & #3 entries GT

Team Stop Twelve

- ➤ Inby RR, DI & GT at the face
- ➤ Outby GT
- ➤ Teams must now ventilate the barricade in the #1 entry

Third Ventilation

- > The team will need to remove the gas in front of the barricade
- > Airlock to enter the barricade
- > Entering the barricade GT
- ➤ Patient Touch, assess & DI
- ➤ Body Touch & DI
- > RR, DI & GT at the face
- > Take the patient to FAB

STOP THE CLOCK

2021 WKMI **PROBLEM MAP** 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ / 19.2 % O₂ HELP GET Ţ ¥ SCSR -ME OUT! SHOVEL B-OPEN BORE SCSR HOLE -SHOVEL BATTERY RAM CAR 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ OPEN BORE HOLE 19.2 % O BATTERY RAM CAR **HELP GET** ME OUT! NO **B** RESPONSE (BC) SCSR. HELP GET ME OUT! BATTERY RAM CAR (CA) BATTERY 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ 19.2 % O₂ SCOOP BATTERY X-MINE PHONE 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ 19.2 % O₂ --15 TIMBERS

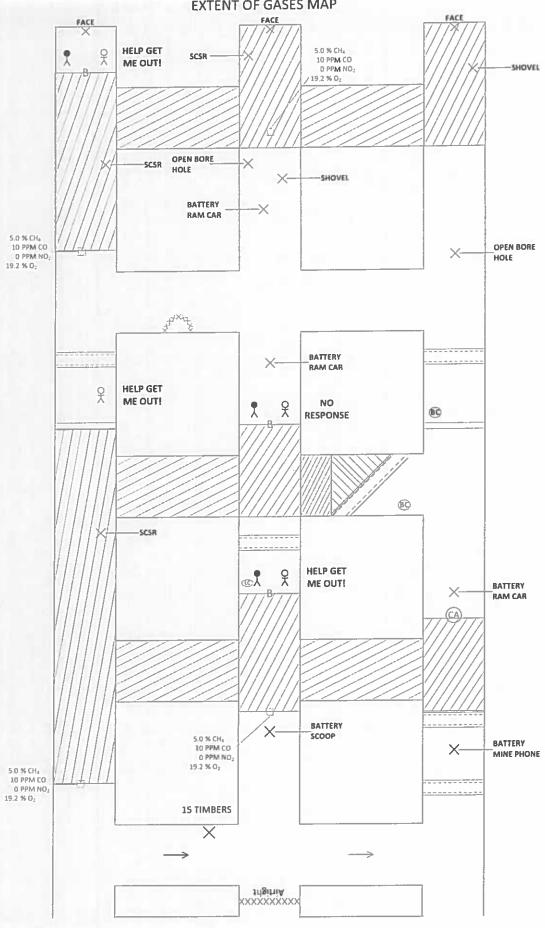
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2021 WKMI **TEAM STOPS MAP** 5.0 % CH₄ 10 PPM CO 0 PPM NO₃ HELP GET SCSR ME OUT! -SHOVEL В / 19.2 % O₂ 12 10/11 (10/11) OPEN BORE HOLE -SHOVEL BATTERY RAM CAR 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ OPEN BORE -0 HOLE 19.2 % O₂ 8/9 7 (8/9) J-XX-T-E BATTERY RAM CAR **HELP GET** ME OUT! NO € RESPONSE 6 (5) (4) (BC) -SCSR **HELP GET @**X ME OUT! BATTERY X-RAM CAR (CA) 3 2 1 BATTERY 5.0 % CH₄ 10 PPM CO 0 PPM NO₃ 19.2 % O₂ SCOOP BATTERY X-MINE PHONE 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ 19.2 % O₂ **-**a 15 TIMBERS X

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2021 WKMI EXTENT OF GASES MAP

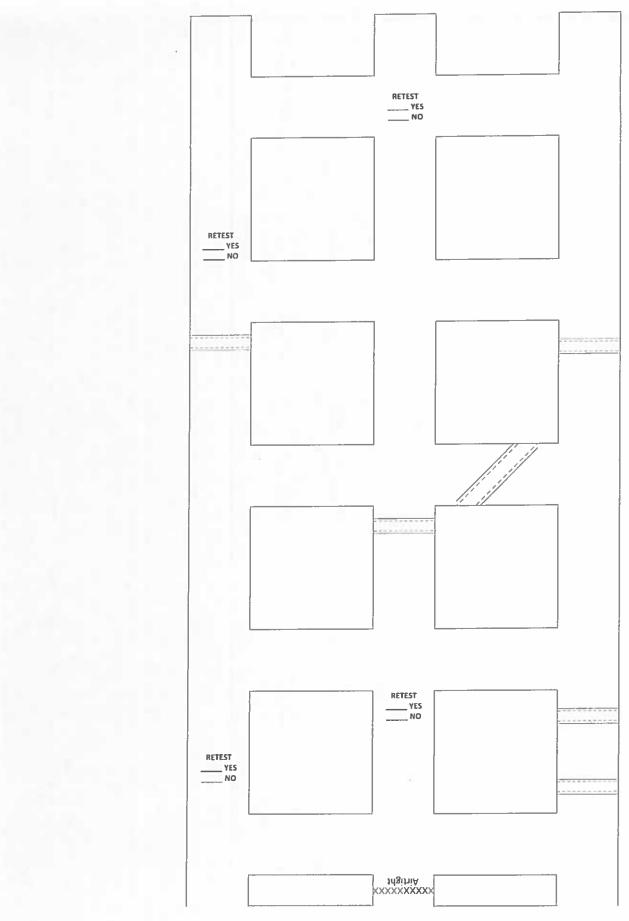


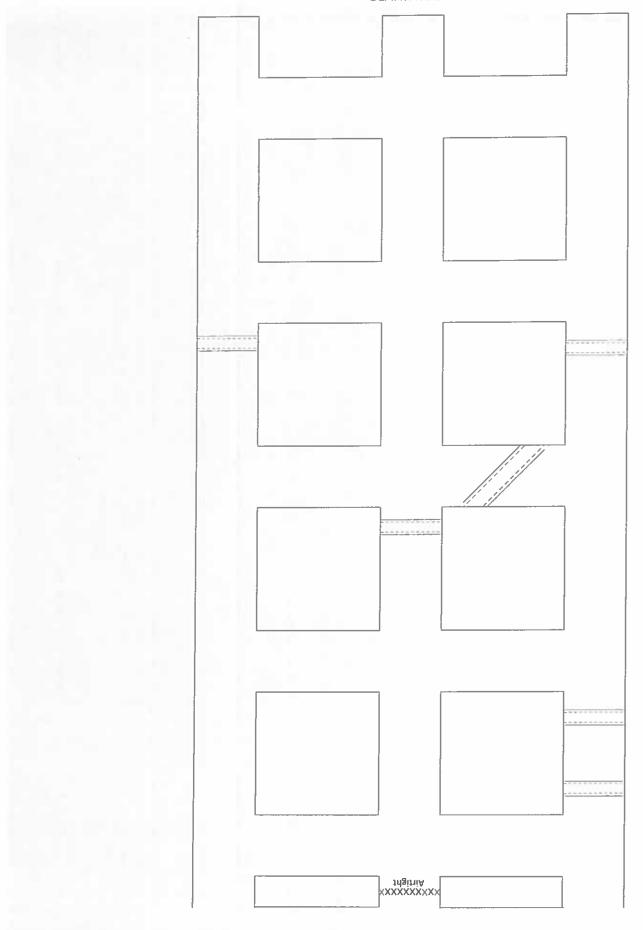
2021 WKMI FIRST VENT MAP FACE FACE HELP GET 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ R SCSR ME OUT! -SHOVEL B 19.2 % O OPEN BORE SCSR HOLE SHOVEL BATTERY RAM CAR 5.0 % CH₄ 10 PPM CO OPEN BORE 0 PPM NO₂ 19.2 % O₂ HOLE JAX4 BATTERY RAM CAR **HELP GET** P ME OUT! NO 80 RESPONSE B (BC) -SCSR O HELP GET ME OUT! BATTERY B REMOVE RAM CAR (CA) 0 Ø BATTERY 0 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ SCOOP MOVE BATTERY MINE PHONE BATTERY MINE PHONE 19.2 % O₂ 5.0 % CH₄ 10 PPM CO 0 PPM NO 0 TO THIS Ó AREA 19.2 % O₂ 15 TIMBERS X XXXXXXXXX JidginiA

2021 WKMI **SECOND VENT MAP** FACE HELP GET 5.0 % CH₄ SCSR 10 PPM CO 0 PPM NO ME OUT! SHOVEL 19.2 % Oz OPEN BORE HOLE -SHOVEL BATTERY RAM CAR 5.0 % CH₄ OPEN BORE 10 PPM CO O PPM NO HOLE 19.2 % O₂ BATTERY RAM CAR £ **HELP GET** ME OUT! NO **BC** RESPONSE TIMBERED ON O THE FIRST VENT **HELP GET** ME OUT! BATTERY REMOVED AFTER X B RAM CAR THE FIRST VENT (CA) 0 TIMBERED ON Ó THE FIRST VENT BATTERY MOVED ON 5.0 % CH₄ SCOOP BATTERY 10 PPM CO MOVED THE MINE PHONE O PPM NO: BATTERY THE FIRST VENT 19.2 % 0 5.0 % CH₄ MINE PHONE Open 10 PPM CO 0 PPM NO, TO THIS Ó. AREA TIMBERED ON 19.2 % O₂ THE FIRST VENT 15 TIMBERS X XXXXXXXXX JugithiA

2021 WKMI THIRD VENT MAP FACE FACE **HELP GET** 5.0 % CH₄ SCSR 10 PPM CO 0 PPM NO₂ ME OUT! SHOVEL 19.2 % Oz OPEN BORE HOLE SHOVEL BATTERY RAM CAR 5.0 % CH₄ 10 PPM CO 0 PPM NO₂ **OPEN BORE** HOLE 19.2 % O₂ 0 Q BATTERY RAM CAR 0 ð **HELP GET** ME OUT! NO 80 RESPONSE REMOVED AFTER B REMOVE THE FIRST VENT TIMBERED ON O THE FIRST VENT **HELP GET** ME OUT! BATTERY REMOVED ON B RAM CAR THE FIRST VENT (CA) 0 **TIMBERED ON** Ö THE FIRST VENT BATTERY MOVED ON 5.0 % CH₄ SCOOP BATTERY 10 PPM CO MOVED THE MINE PHONE D PPM NO BATTERY THE FIRST VENT 5.0 % CH₄ 19.2 % O₂ MINE PHONE Open 10 PPM CO 0 PPM NO TO THIS Ò AREA TIMBERED ON 19.2 % D₂ THE FIRST VENT 15 TIMBERS X XXXXXXXXX Antight

2021 WKMI FINAL VENT MAP





PATIENT'S STATEMENT

HELP GET ME OUT!!