CRAIG, COLO. – PRE-SHIFT CONTEST – 2017

CONTESTANT: _________________________ WORKING No.:_____

JUDGES INSTRUCTIONS

1. Show contestant time clock and check in/out board and the extent of problem working area. Contestant only has to hang tag on board and does not have to sign and date board.
2. Contestant must provide own distance measuring device, tool apron, blank index cards (additional index cards will be in packet), pen/pencil, paper, clipboard, anemometer, watch, roof testing device, and detector.
3. Contestant will be taken to staging area and given the blank mine map, statement, and ventilation and roof control plans. Contestant has **10 minutes** to review these and make any notes. The mine map, statement, notes if any and mine plans will be collected by contest judge. **THE Mine Map, Statement, Notes if any, and Mine Plans will be returned to the Contestant when they arrive at field to start the Problem.**
4. Contestant has **2 minutes** after arriving at field to set out equipment.
5. Contestants have **30 minutes** after starting clock to complete the problem. Judges will notify contestant when **1 minute** is left.
6. Don’t take contestant back on field after clock is stopped & **don’t discuss discounts.**

JUDGING INFORMATION

<table>
<thead>
<tr>
<th>OUTSIDE</th>
<th>CHECK IF DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>START CLOCK...Rule #1..........................................................</td>
<td>________</td>
</tr>
<tr>
<td>CHECK IN........Rule #1........................................................</td>
<td>________</td>
</tr>
<tr>
<td>CHECK SCSR.....Rule #3.......................................................</td>
<td>________</td>
</tr>
<tr>
<td>(Following items as per Rule #2)</td>
<td></td>
</tr>
<tr>
<td>CHECK GAS DETECTOR (Must be left on during problem)..............</td>
<td>________</td>
</tr>
<tr>
<td>CHECK IF CONTESTANT HAS REQUIRED EQUIPMENT</td>
<td></td>
</tr>
<tr>
<td>SAFETY CAP........................................................................</td>
<td>________</td>
</tr>
<tr>
<td>SAFETY BOOTS (not shoes)....................................................</td>
<td>________</td>
</tr>
<tr>
<td>MINING BELT w/ID TAG THAT MATCHES CHECK-IN TAG.................</td>
<td>________</td>
</tr>
<tr>
<td>MSHA APPROVED CAP LIGHT (must work but can be left off). ....</td>
<td>________</td>
</tr>
<tr>
<td>SCSR..................................................................................</td>
<td>________</td>
</tr>
<tr>
<td>ANEMOMETER.......................................................................</td>
<td>________</td>
</tr>
<tr>
<td>WATCH.................................................................................</td>
<td>________</td>
</tr>
<tr>
<td>MSHA APPROVED GAS DETECTOR (must be left on)....................</td>
<td>________</td>
</tr>
<tr>
<td>ROOF TESTING DEVICE.........................................................</td>
<td>________</td>
</tr>
<tr>
<td>DISTANCE MEASURING DEVICE................................................</td>
<td>________</td>
</tr>
<tr>
<td>TOOL APRON (Not required)....................................................</td>
<td>________</td>
</tr>
<tr>
<td>BLANK INDEX CARDS............................................................</td>
<td>________</td>
</tr>
<tr>
<td>PEN/PENCIL/MARKER............................................................</td>
<td>________</td>
</tr>
<tr>
<td>PAPER (Not required)...........................................................</td>
<td>________</td>
</tr>
<tr>
<td>CLIPBOARD(Not required) ....................................................</td>
<td>________</td>
</tr>
</tbody>
</table>
### JUDGING INFORMATION

**GAS TESTS & DTI's** *(Rule 4, 5 and 6)*

<table>
<thead>
<tr>
<th>Entry</th>
<th>Made</th>
<th>Test DTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1 Entry</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>No. 2 Entry</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>No. 3 Entry</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>No. 2 Power Center</td>
<td>______</td>
<td>______</td>
</tr>
</tbody>
</table>

**ROOF TESTS** *(verbally state visual exam in each entry)* **Rule 10 TEST MADE**

<table>
<thead>
<tr>
<th>Entry</th>
<th>Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1 Entry</td>
<td>______</td>
</tr>
<tr>
<td>No. 2 Entry</td>
<td>______</td>
</tr>
<tr>
<td>No. 3 Entry</td>
<td>______</td>
</tr>
</tbody>
</table>

**HAZARDOUS CONDITIONS** *(verbally identify)*

<table>
<thead>
<tr>
<th>Entry</th>
<th>Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1 Entry</td>
<td>Diesel truck parked under Life line (can move truck).________</td>
</tr>
<tr>
<td>No. 1 Entry</td>
<td>5 lb. extinguisher needs to be a 10 lb. or 2 - 5 lb. (DTI and report).________</td>
</tr>
<tr>
<td>No. 1 Entry</td>
<td>Un-attended Diesel scoop idling (turn off scoop).________</td>
</tr>
<tr>
<td>No. 1 Entry</td>
<td>Curtain too far from face (extend curtain).________</td>
</tr>
<tr>
<td>No. 1 Entry</td>
<td>No air flow to face (install curtain).________</td>
</tr>
<tr>
<td>No. 1 Entry</td>
<td>Check curtain needs to be stopping x-cut #2 (can turn off belt).________</td>
</tr>
<tr>
<td>No. 2 Entry</td>
<td>Vent too far from face (extend curtain).________</td>
</tr>
<tr>
<td>No. 3 Entry</td>
<td>No branch line to SCSR’s (DTI and report).________</td>
</tr>
<tr>
<td>No. 3 Entry</td>
<td>Not enough SCSR’s for people on section (DTI and report).________</td>
</tr>
<tr>
<td>No. 3 Entry</td>
<td>SCSR’s not stored properly in container (DTI and report).________</td>
</tr>
</tbody>
</table>

**AIR READING** *(taken for one minute in last open cross-cut, provide individual with 280 FPM of air flow and an area of 7.5 feet by 18 feet this is the only information to provide.)*

**NOTES:**

1. Must take air readings for **60 seconds**. Rule 8
3. Contestant may use either anemometer held in proper direction of air flow.
4. If placard not present at required gas test location, O2 = 20.9%, CH4 = 0.0%.
5. Acts of endangerment, i.e. crossing moving belt. Rule 16
6. Acts that could result in explosion, explosive methane over ignition source. Rule 15
7. Not identifying hazard. Rule 11
8. Not correcting hazard. Rule 12

Contestant can correct following hazards:

1. Truck under life line.
2. Turn off diesel scoop.
3. Extend curtain in #1 face.
4. Install curtain to get air flow to #1 face.
5. Extend curtain in #2 face.
6. Turn off belt for missing stopping.
Use Indelible Pencil or ink

**PRESHIFT – CERTIFIED EXAMINER’S REPORT**

Report Shall Be Signed When Finished

Date of Examination ______ Time From: _______ AM/PM To: _______ AM/PM

Section/Area _______ Reported Outside? Yes ___ No ___ Time: _______ AM/PM

Reported By:____________________Received By:____________________ INITIAL (AUTHORIZED PERSON)

---

**Preshift required within 3 hours prior to any 8-hour interval.**

<table>
<thead>
<tr>
<th>Location</th>
<th>Hazardous Condition</th>
<th>CH₄</th>
<th>Action Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Entry</td>
<td>Truck under life line</td>
<td></td>
<td>Truck moved</td>
</tr>
<tr>
<td>Entry #1, face</td>
<td>No air flow</td>
<td>0.0%</td>
<td>Installed curtain</td>
</tr>
<tr>
<td>Entry #1, face</td>
<td>Curtain too far back</td>
<td>0.0%</td>
<td>Extended curtain</td>
</tr>
<tr>
<td>Entry #1 to #2, XC #2</td>
<td>Stopping not built</td>
<td>0.0%</td>
<td>Turned off belt</td>
</tr>
<tr>
<td>Entry #1 power center</td>
<td>Too small fire extinguisher</td>
<td>0.0%</td>
<td>Designed</td>
</tr>
<tr>
<td>Entry #1 x-cut 3</td>
<td>Diesel scoop idling</td>
<td></td>
<td>Turned off scoop</td>
</tr>
<tr>
<td>Entry #2, face</td>
<td>Curtain too far back</td>
<td>0.0%</td>
<td>Extended curtain</td>
</tr>
<tr>
<td>Entry #3</td>
<td>No branch line to SCSR’s</td>
<td></td>
<td>Dangered</td>
</tr>
<tr>
<td>Entry #3</td>
<td>Not enough SCSR’s</td>
<td></td>
<td>Dangered</td>
</tr>
<tr>
<td>Entry #3</td>
<td>SCSR’s store in-correctly</td>
<td></td>
<td>Dangered</td>
</tr>
<tr>
<td>Power Center</td>
<td>Gas reading may be part of other entry above</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Entry #3 face</strong></td>
<td><strong>Gas reading may be part of other entry above</strong></td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Entry #2 face</strong></td>
<td><strong>Gas reading may be part of other entry above</strong></td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Entry #1 face</strong></td>
<td><strong>Gas reading may be part of other entry above</strong></td>
<td>0.0%</td>
<td></td>
</tr>
</tbody>
</table>

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**Air Measurements**

<table>
<thead>
<tr>
<th>Location</th>
<th>CFM</th>
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</thead>
<tbody>
<tr>
<td>LOX</td>
<td>37,800</td>
</tr>
</tbody>
</table>

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**Velocities**

Longwall Headgate: ________________  Longwall Tailgate: ________________

CH₄: _______ O₂: _______

Remarks:

---

Signed by Preshift Certified Examiner __________________ Date __________ Certification Number __________

Countersigned by Mine Foreman __________________ Date __________ Certification Number __________

Countersigned by Operator/Agent __________________ Date __________ Certification Number __________

---

THIS RECORD TO BE MAINTAINED FOR ONE (1) YEAR
Date of Examination: ____________________ Time From: __________ AM/PM To: __________ AM/PM

Section/Area: __________ Reported Outside? Yes ___ No ___ Time: __________ AM/PM

Reported By: ____________________ Received By: __________ INITIAL (AUTHORIZED PERSON)

**Preshift required within 3 hours prior to any 8-hour interval.**

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<th>Hazardous Condition</th>
<th>CH₄</th>
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<tr>
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</tbody>
</table>

Air Measurements

<table>
<thead>
<tr>
<th>Location</th>
<th>CFM</th>
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</tr>
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<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Velocities

Longwall Headgate: __________ Longwall Tailgate: __________

CH₄: ________ O₂: ________

Remarks:

Signed by Preshift Certified Examiner: ____________________ Date: __________ Certification Number: __________

Countersigned by Mine Foreman: ____________________ Date: __________ Certification Number: __________

Countersigned by Operator/Agent: ____________________ Date: __________ Certification Number: __________
VENTILATION PLAN

1. Ventilation devices shall be maintained to within 5 feet of the face and to the last row of supports for mined faces.

2. Permanent ventilation (stoppings) shall be maintained up to and including the third connecting crosscut between the belt and the return. Permanent ventilation (stoppings) shall be installed between the belt and the intake prior to operation of the belt.

3. When an auxiliary fan is operating and the ventilation tubing is routed through the crosscut immediately outby the last open crosscut, compliance with the last open crosscut ventilating requirement will be met if the sum of the air quantities in the vent tube and last two open crosscuts exceeds the quantity specified below.

4. Ambient Carbon Monoxide is 5 PPM.

5. AMS sensor on 1000 foot spacing.

6. Air Quantities Required

<table>
<thead>
<tr>
<th>Working Face</th>
<th>12,000 CFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idle Face</td>
<td>3,000 CFM</td>
</tr>
<tr>
<td>Bolting Face</td>
<td>5,000 CFM</td>
</tr>
<tr>
<td>Last Open Crosscut</td>
<td>20,000 CFM</td>
</tr>
</tbody>
</table>

Roof Control Plan

1. The Roof Control Plan requires 5-foot fully grouted resin bolts to be installed on 5-foot by 5-foot centers, with a minimum of 4 bolts per row.

2. Roof bolts are required to be installed to within 5 feet of the face.

3. The depth of mining cuts shall not exceed 40 feet as measured from the last row of permanent supports.

4. Faces shall be bolted within 24 hours of mining; except during equipment (roof bolter) breakdowns. Upon completion of repairs, bolting of un-supported faces shall immediately begin.

5. Travel in or inby un-supported openings to an intersection shall be restricted; except for conducting required examinations and necessary ventilation changes.
CONTESTANT STATEMENT

You have been assigned to do a pre-shift examination of the 001 section. This includes all entries #1 through #3 inby the Mains. Entries average 18 to 20-feet wide and 8 to 10-feet high. The mine has a history of methane and water. Energizing / de-energizing equipment is handled through switches. All actions must be verbalized to the Judges. Gas readings and air readings will be handled through the Judges.
Bolted to face

Continuous Miner
- power off
- last row
- supports 5'
- 10' from face

2 Roof bolters
- bolting 2nd to
- last row

Unattended diesel
- scoop idling

Check curtain
- X pallet of rock
- dust 32 bags
- CO sensor
- fire outlet

Phone
- belt running
- 500' fire hose

5 lb. extinguisher

6 miners eating

Parked haul truck
- PE

Life line installed over haul truck
- AE
Preshift Written Exam

1. Escapeways shall be clearly ______ to show the route and direction of travel to the surface. (30 CFR 75.380(d)(2))
   a) identified  b) marked  c) posted

2. Self-contained self-rescuers are used to protect the wearer from the ______ of irrespirable atmosphere.
   a) effects  b) hazards  c) dangers

3. Ventilation is ______ to dilute, render harmless, and carry away flammable, explosive, noxious, and harmful gases, dusts, smoke, and fumes. (30 CFR 75.325, 330(b)(1))
   a) required  b) necessary  c) utilized

4. High spots where methane is likely to accumulate, over haulageways where equipment will travel must be ______ during the preshift examination. (30 CFR 75.360)
   a) checked  b) examined  c) tested

5. Tests for oxygen deficiency shall be made by a qualified person with MSHA approved oxygen detectors maintained in permissible and proper operating condition. (30 CFR 75.360)
   a) certified  b) qualified  c) trained

6. A preshift examiner must be certified or ______ in the State in which the coal mine is located. (Mine Act 1977, Sect. 318(a))
   a) employed  b) qualified  c) registered

7. Conveyor belts used to transport persons during the oncoming shift must be ______ during the preshift examination. (30 CFR 75.360)
   a) examined  b) traveled  c) walked

8. ______ detectors should be calibrated with a known methane-air mixture at least once every 31 days. (30 CFR 75.320(a))
   a) Methane  b) Oxygen  c) Multi-gas

9. A visual examination of the roof, face and ribs shall be made immediately before any ______ is started in an area and thereafter as conditions warrant. (30 CFR 75.211(a))
   a) work  b) mining  c) support

10. The upper explosive ______ for methane is 15 volume percent. (MSHA 2102, p. 31)
    a) limit  b) range  c) level
Preshift Written Exam

1. Escapeways shall be clearly _______ to show the route and direction of travel to the surface. (30 CFR 75.380(d)(2))
   a) identified       b) marked       c) posted

2. Self-contained self-rescuers are used to protect the wearer from the _______ of irrespirable atmosphere.
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    a) limit        b) range        c) level
Placard list for contest per field:

Power Center     Phone
Parked Haul Truck     Pallet of Rock Dust 32 bags
Primary Escapeway     500' fire hose
Alternate Escapeway     belt remote switch

(Times 3)

Belt
Tail Piece

Continuous miner No Power
Last Row of supports 5'
2 Roof Bolters bolting 2nd to last row
Check curtain (Times 4)
5 lb. fire extinguisher
SCSR (Times 5)
Pallet

Un-attended Diesel scoop idling
CO sensor
Stopping (times 3)
Belt Running (times 2)

Walkway side Belt (times 2)
6 Miners Eating
Life Line (times 2)
Bolted to face with warning sign
Permanent Stopping
Continuous Miner No Power
2 Roof Bolters
Bolting 2\textsuperscript{nd} to last row
Last row of supports with warning sign
Face
Section Tail Piece

Place on back of placard # 8
Power Center
Place on back of placard #11
Un-attended
Diesel Scoop
Idling
Pallet of Rock Dust 32 Bags
Walkway
Side of Belt
Fire Outlet
AMS Sensor
Check Curtain
Belt Running
5 lb. Fire Extinguisher
5 SCSR’s on Wooden Pallet
Belt Remote Switch
6 Miners Eating
Parked Haul Truck
Phone

Place on back of placard # 28
Life Line
Intake #1
Return #3
Belt Line #2
Alternate Escapeway
Primary Escapeway
500’ Fire Hose
Permanent Stopping