

## Judge's Instructions

1. Show the contestant the time clock and the check in/out board.
2. Provide contestant with the blank map, written statement, and ventilation and roof control plans. The contestant has 5 minutes to review the plans prior starting the clock and the underground portion of the contest.
3. Show the contestant the entries and which area he or she is to pre-shift. Entries are labeled left to right facing inby.

Contestant needs to take air reading #1 face, #2 and the #3 face to be able to insure compliance with vent plan.

For taking the air reading on the section, give the contestant the following information:

|     |                   |  |                         |
|-----|-------------------|--|-------------------------|
| LOX | <b>Width =</b>    | <b>20 feet</b>   |                         |
|     | <b>Height =</b>   | <b>8 feet</b>  |                         |
|     | <b>Area =</b>     | <b>160</b>   | <b>CORRECT LOCATION</b> |
|     | <b>Velocity =</b> | <b>148 fpm for LOX</b>   |                         |
|     | <b>CFM =</b>      | <b>23680 CFM</b>   |                         |
|     | <b>#1 face =</b>  | <b>255 FPM Area measurements behind curtain 2 by 8 = 4080 cfm</b>    |                         |
|     | <b>#2 face =</b>  | <b>832 FPM Area measurements behind curtain 2.5 by 8 = 16640 cfm</b> |                         |
|     | <b>#3 face =</b>  | <b>76 FPM Area measurements behind curtain 3 by 8 = 1824 cfm</b>     |                         |

If contestant does not take an air reading in the proper location for the LOX; **deduct for improper location**

Provide the contestant the following gas reading for the outby areas 0.0% CH<sub>4</sub> and 20.9% O<sub>2</sub>.

Contestant must simulate taking the air reading for **60 seconds**.

Contestant can correct following hazards; life line over belt after turning the belt off, low ventilation in #1 face; Diesel running in #1 face turn off diesel; low ventilation in #2 face; low ventilation in #3 face;.

The contestant will have 30 minutes to work the problem. Notify the contestant when 1 minute remains.