

Hazardous Atmospheres in Confined Spaces

Name: _____ Date: _____

Multiple Choice (circle the correct answer):

- In order for a confined space to be considered safe for workers, the ventilation must ensure that the atmosphere maintains:
 - An oxygen content between 19.5% and 23.5%
 - Flammable gases below 10% of the lower explosive limit (LEL)
 - Concentrations of toxic materials below their permissible exposure limit
 - All of these
- Which of the following is a potential air contaminant within a permit-required, confined space?
 - Hydrogen Sulfide (H₂S)
 - Phosphine (PH₃)
 - Carbon Monoxide (CO)
 - All of these
- A _____ is a qualitative function check in which a challenge gas is passed over the sensor(s) at a concentration and exposure time sufficient to activate all alarm settings. The purpose of this check is to confirm that gas can get to the sensor(s) and that all the instrument's alarms are functional.
 - Calibration
 - Bump-Test
 - Air Exchange Test
 - None of These

True or False – Circle the Correct Answer

- T or F Bump testing an atmospheric monitor may be performed in place of routine calibration.
- T or F Should an atmospheric monitor alarm during entry into a permit-required, confined space, entrants should exit the space immediately.
- T or F Mechanical, forced-air ventilation is a method used for ventilating a permit space. This may involve the use of grounded air movers powered by compressed air, electric fans or blowers.
- T or F Forced-air ventilation fans do not need to be properly rated for the hazards present (i.e. combustible dust, flammable vapors, etc.) as long as they are positioned outside of the permit-required space.
- T or F In order to calculate purge time, one must first know the cubic footage of the confined space. This number is then divided by the cubic foot per minute (cfm) displacement of the blower. This results in the air changes per hour (ACH).
- T or F The atmosphere within a permit-required, confined space must be periodically tested to ensure that the continuous forced-air ventilation is preventing the accumulation of a hazardous atmosphere.
- T or F It is impossible for the atmosphere within a permit-required, confined space to form layers.

Key

1. D
2. D
3. B
4. F
5. T
6. T
7. F
8. T
9. T
10. F