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# **PERMIT-REQUIRED CONFINED SPACES: HAZARDOUS ATMOSPHERES**

**Leader's Guide, Fact Sheet  
& Quiz**

**Item Number: 5254**  
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*This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.*

## **PREPARING FOR THE MEETING**

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes before the quiz itself, which is on the final page.

## **CONDUCTING THE PRESENTATION**

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

## **5254 PERMIT-REQUIRED CONFINED SPACES: HAZARDOUS ATMOSPHERES FACT SHEET**

**LENGTH: 2:23 MINUTES**

### **PROGRAM SYNOPSIS:**

A "Hazardous Atmosphere" as it relates to a confined space, is any atmosphere within the space that may expose employees to the risk of death, incapacitation, injury, acute illness or impairment of the ability to escape unaided from the space. The confined space entry permit will specify the atmospheric testing and monitoring required to detect atmospheric hazards as well as the methods that must be used to control those hazards.

### **PROGRAM OBJECTIVES:**

After watching the program, the participant should be able to explain the following:

- What a hazardous atmosphere is;
- The common causes of hazardous atmospheres.

### **INSTRUCTIONAL CONTENT:**

#### **PERMIT-REQUIRED CONFINED SPACES: HAZARDOUS ATMOSPHERES**

- A "Hazardous Atmosphere" as it relates to a confined space, is any atmosphere within the space that may expose employees to the risk of death, incapacitation, injury, acute illness or would interfere with an individual's ability to escape unaided from the space.
- Some common causes of hazardous atmospheres include:
  - Explosive atmospheres, which exist when any flammable gas, vapor or mist exceeds 10 percent of its lower flammable limit or when airborne combustible dust is present that meets or exceeds its lower flammable limit.
  - Oxygen-Deficient Atmospheres, which exist when oxygen levels fall below 19.5 percent, which is not enough oxygen for sufficient breathing. A common cause of an oxygen deficient atmosphere is when another gas, such as nitrogen displaces the oxygen within the space.
  - Oxygen-Rich Atmospheres, which exist when oxygen levels exceed 23.5 percent. At this oxygen level any source of ignition could cause a fire or explosion.
  - Toxic Atmospheres, which exist when the space contains concentrations of toxic or hazardous substances that exceed the permissible exposure limit or dose of the substance. Hydrogen Sulfide and Carbon Monoxide are common gases that can create a toxic atmosphere inside a confined space.
- When an atmosphere inside a confined space poses an immediate or delayed threat to life or would cause irreversible adverse health effects or would interfere with an individual's ability to escape unaided from the space, that atmosphere is referred to as "Immediately Dangerous to Life or Health" which is also called an "IDLH" atmosphere.
- The confined space entry permit will specify the atmospheric testing and monitoring required to detect atmospheric hazards as well as the methods that must be used to control those hazards.

**PERMIT-REQUIRED CONFINED SPACES: HAZARDOUS ATMOSPHERES**

**ANSWERS TO THE REVIEW QUIZ**

1. e

2. c

3. a

4. a

**PERMIT-REQUIRED CONFINED SPACES: HAZARDOUS ATMOSPHERES**  
**REVIEW QUIZ**

Name \_\_\_\_\_ Date \_\_\_\_\_

*The following questions are provided to determine how well you understand the information presented in this program.*

1. A hazardous atmosphere is any atmosphere within the space that may expose employees to the risk of \_\_\_\_\_.
  - a. Death
  - b. Injury
  - c. Acute illness
  - d. Being unable to escape unaided from the space
  - e. All of the above
  
2. An explosive atmosphere exists when any flammable gas, vapor or mist exceeds \_\_\_\_\_ of its lower flammable limit.
  - a. 3 percent
  - b. 5 percent
  - c. 10 percent
  
3. An oxygen-deficient atmosphere exists when oxygen levels fall below \_\_\_\_\_.
  - a. 19.5 percent
  - b. 21.5 percent
  - c. 23.5 percent
  
4. A toxic atmosphere exists when concentrations of toxic or hazardous substances exceed the permissible exposure limit of the substance.
  - a. True
  - b. False