

Job site: \_\_\_\_\_  
 Foreman: \_\_\_\_\_

Date: \_\_\_\_\_  
 G.C. \_\_\_\_\_

**SMOHIT Safety Sense**  
 Toolbox Talks for the Sheet Metal Industry

**Types of Air Monitoring**

- Air monitoring provides important information about the presence of particular hazardous substances or lack of oxygen in the work place. Air monitoring can detect potential hazardous conditions and measures the concentrations of hazardous substances.
- Airborne concentrations of hazardous substances should be measured for a number of reasons. Air monitoring determines workers exposure level and the location and extent of hazardous conditions. It also assists in selecting what type of PPE and in planning work activities. Air monitoring helps document exposure levels and creates records of exposures.
- Always be sure to monitor the inside of the space from the outside of the space first by collecting an air sample through a sampling probe inserted into the space.
- Many types of hazards and hazardous situations can be detected through air monitoring. Oxygen-deficient atmospheres, which are atmospheres that contain less than 19.5% oxygen, can be detected by air monitoring. Oxygen-enriched atmospheres can also be monitored through air monitoring. Oxygen-enriched atmospheres contain more than 23.5% oxygen, and increase the risk of fire or explosion.
- Combustible gas meters monitor flammable and explosive chemicals to detect fire and explosion hazards. It is important to measure the oxygen level first because the meters will not register correctly if the oxygen is too low.
- Most toxic chemicals can be monitored or sampled to determine the airborne levels, but monitoring instruments that give immediate results have limited application. If a chemical cannot be identified immediately it is taken to a lab for further analysis.
- Detecting biological hazards is important because the presence of bacteria, viruses, and certain parasites will affect the PPE selection as well as decontamination and disposal procedures. Specialists should be brought in to analyze biohazards.

**Instructor Tips**

- **Emphasize that qualified persons should monitor air quality to determine oxygen content and presence of toxic or flammable chemicals of any space, especially a confined space, before entering.**
- **Explain that although radioactivity can be monitored, no single instrument can precisely detect and measure all forms of radiation, so special technicians, such as Radiation Safety Officers, should conduct the monitoring of radioactivity.**

Name		Init.	Name		Init.
1.			13.		
2.			14.		
3.			15.		
4.			16.		
5.			17.		
6.			18.		
7.			19.		
8.			20.		
9.			21.		
10.			22.		
11.			23.		
12.			24.		

Reference: National Center for Energy Management and Building Technology