



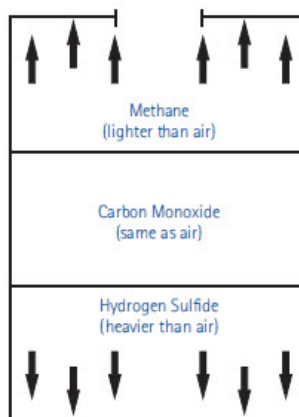
HAZARDOUS ATMOSPHERES IN PERMIT REQUIRED CONFINED SPACES

Toolbox Talks for the members of Iowa Association of Municipal Utilities

April 2016

According to OSHA, a hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury or acute illness from one or more of the following causes:

- ◆ Flammable gas, vapor or mist in excess of 10% of its lower flammable limit (LFL).
- ◆ Airborne combustible dust at a concentration that meets or exceeds its LFL (This concentration may be approximated as a condition in which the dust obscures vision at a distance of $\leq 5'$).
- ◆ Oxygen enriched ($>23.5\%$) or oxygen deficient ($<19.5\%$) atmospheres.
- ◆ Atmospheres where any substance regulated by OSHA (1926 Subpart G or 1910 Subpart Z) is in excess of the PEL or dose. For air contaminants for which OSHA has not determined a dose or PEL, other sources of information, such as a material-specific SDS, can provide guidance in establishing acceptable atmospheric conditions.
- ◆ Temperatures extremes (too hot or too cold).
- ◆ Any other atmospheric condition that is immediately dangerous to life or health. IDLH conditions are considered to pose an immediate or delayed threat to life (some effects of toxic materials may not be noticed for 12-72 hours after exposure); would cause irreversible adverse health effects; or would interfere with an individual's ability to escape unaided from a permit space.



- Air monitoring is the most important part of any Permit Required Confined Space program. Using your sense of smell to determine the presence of toxic gases may be deadly. The only way to safely detect a hazardous atmosphere is with a calibrated direct reading instrument.

Always maintain your monitoring equipment according to manufacturer's directions!