



DAYTON, OHIO REGIONAL HAZ-MAT RESPONSE TEAM NEWSLETTER

November 2004

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Detection & Air Monitoring

When operating at an incident, it is the Incident Commander's responsibility to ensure the crews are working in a safe environment. We monitor the air quality for two distinct reasons:

- We are concerned about the quality of the atmosphere we are being exposed to.
- OSHA requires an employer to monitor the air quality if a chance exists that a low oxygen condition or the presence of a toxin may exist.

Accuracy

The electro-chemical sensors in our meters have a +/- 10% accuracy rate. If you choose to use a colorimetric (Drager / Sensidyne) tube, they are only +/- 35% accurate. As you can see, *air monitoring is an art not a science.*

Three, Four & Five Gas Meters

These meters are designed to give you quick, easy and somewhat reliable information in a short period of time. They normally read the following:

- **Oxygen** measured as percent in air-%
- **Flammable vapors** % of the LEL
- **Toxins** measured in parts per million-ppm

When using a four or five gas meter, remember the combustible gas detection assembly may be an ignition source in areas that contain greater than 21% oxygen.

These oxygen enriched environments can be very dangerous. This is where materials will burn faster and hotter than normal. Accurate predictions are not possible in this type of atmosphere.

Oxygen Deficient Atmospheres

Air containing less than 10% oxygen does not allow for accurate combustibility readings.

Combustible Gas Indicators

The CGI portion of most meters reads how close you are to the Lower Explosive Limit (LEL). The reading in the window is the percent of the LEL. If your meter reads 100, you are in an explosive environment.

Toxins

These sensors are for specific toxic vapors. If you are dealing with a product different than what is in your meter, you must use a different method of detection.

Calibration

Each and every meter has requirements for calibration. Be sure to calibrate your meters according to the manufacturer. Failure to do this may affect the accuracy of the meter. Performing a bump test before each use is always helpful.

Always use the meter in accordance with the manufacturer's recommendations.

Next month: Colorimetric Tubes & Radiation Detection Kits

40-Hour Haz-Mat Technician Class

We will be conducting a 40-Hour Haz-Mat Technician class at the Sugarcreek Fire Department Training Center on January 8-9-15 & 16. This class is open to all Fire, EMS and Law Enforcement personnel. Please contact Denny at 901-5112 for further information.

November Training

The morning session will be an introduction to the new LINC'S dispersion modeling system. Following this presentation we will begin the Technician Refresher Training class.

If you did not attend the May or September Team training session, you will receive Technician refresher certification this month. Please refer to the *October 2004 Newsletter for more info on Team membership status.*

2004 Training Schedule

November 18, 19, 20

0900-1200 hours

Dayton Fire Training Center

LINC'S

and

Technician Refresher –Must attend the full session.

December

No Training