

# Air Monitoring Exercise

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# Presentation Topics

- Monitoring Strategies
- Air Sampling and Air Monitoring
- Instrument Calibration
- Direct-Reading Instruments for:
  - Flammable Atmospheres
  - Oxygen Atmospheres
  - Toxic Atmospheres
- Calibration and Relative Response
- Using Detector Tubes



# pH Paper Demo

Video Removed

# Flammable Atmospheres

- Readings expressed as % of LEL
- Instrument does not identify specific chemical
- Instrument does not respond to combustible dust
- General action level is 10% of LEL



# Oxygen Atmospheres

- Electrochemical sensor is selective for oxygen
- Expresses readings in % oxygen in air
- Normal air is 20.9% oxygen
- Acceptable readings are 19.5 – 23.5%
- Any variation *could* indicate problem



# Toxic Atmospheres

- Chemical specific and general survey instrument
- Readings expressed in parts per million (ppm)
- Survey instrument (PID) may be converted with relative response factor
- Specific chemicals have exposure limits such as:
  - Permissible Exposure Limit
  - Threshold Limit Value



# Detector Tubes

- Specific chemical or family of chemicals
- Most express reading as length of stain with scale on side of tube
- Readings in PPM
- $\pm 25\%$  accuracy allowed
- Interference or cross sensitive chemicals

