

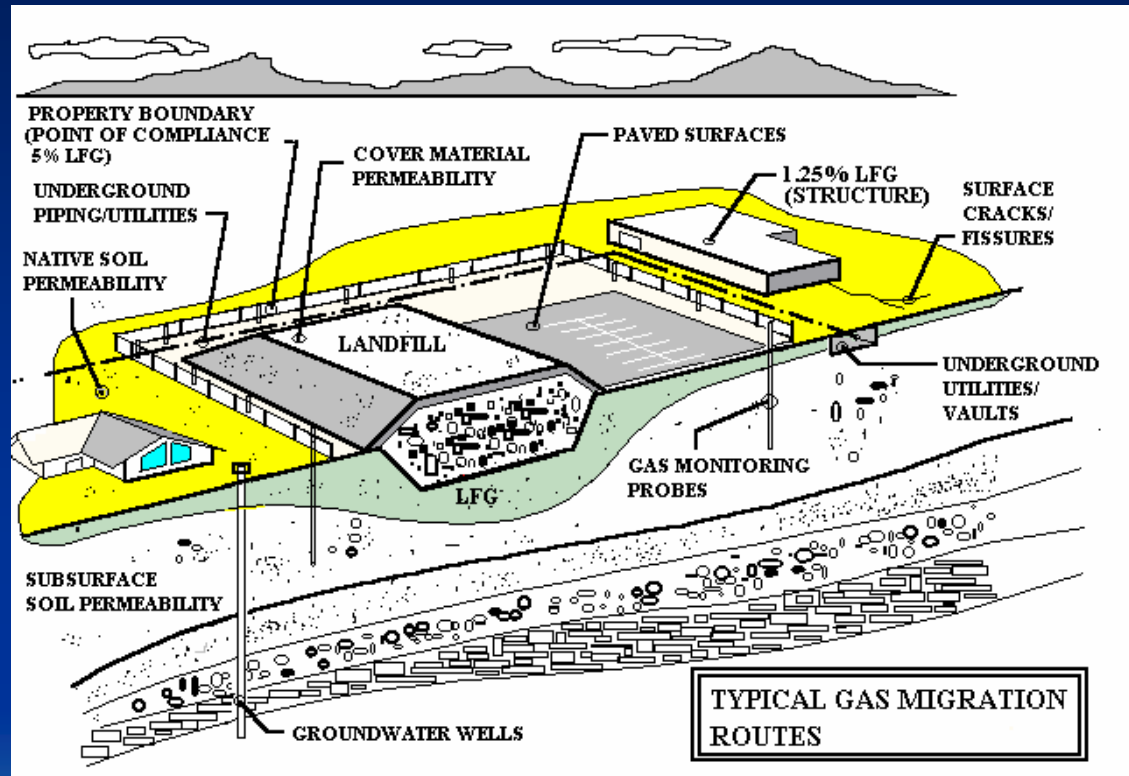
# Structure Gas Monitoring Requirements in 27 CCR



Glenn K. Young, P.E.  
Senior Waste Management Engineer  
Closed Illegal & Abandoned Sites

# Structure Gas Monitoring

- Purpose
- Data Analysis
- Results



# Structure Gas Monitoring



# Structure Gas Monitoring Regulations in 27 CCR

- 20921 (a) (1) requires that “...The concentration of methane gas must not exceed 1.25% by volume in air within on-site structures...”
- 20931(a) “...monitoring network design shall include provisions for monitoring on site structures, including but not limited to buildings, subsurface vaults, utilities or other areas where potential gas buildup would be of concern...”
- 20931(c) “...Structures located on top the waste disposal area shall be monitored on a continuous basis..”
- 20934 (a)(1) “...monitoring reports shall include: (1) the concentrations of the methane....within each on-site structure..”
- 20937 (a)(3) “...the documentation of date, time, barometric pressure, atmospheric pressure, general weather conditions and probe pressures...”





# Structure Gas Monitoring Data Analysis

- Time-trend continuous monitoring data for one year from 8 gas sensors placed throughout the park will be reviewed by the CIWMB/LEA to determine if 1.25% gas is exceeded in monitored coach skirts
- **Important Note:** Based on the results of the CIWMB Gas Investigation Report (Feb 2005), it is recommended that all coaches be required to be equipped with continuous gas monitoring systems (fixed combustible gas detection systems) since the integrity of the disposal site cap is unknown under each coach
- Applicable Regulation: 20937 Control (d) “...When the results of monitoring in on site structures indicate levels in excess of those specified in Section 20923(a), the operator shall take appropriate action to mitigate the effects of landfill gas accumulation in on site structures, and public health and safety, shall include one or more of the following:...(4) Alarms, ...(5) Ignition source control...(7) Ventilation...”

# Structure Gas Monitoring Results

- **End State**: The site will be judged to be in compliance with applicable regulations (27 CCR 20931 & 20937) when all coaches are continuously monitored for landfill gas and actions are taken to prevent the accumulation of gas in coaches where concentrations exceed 1.25%  $V_{\text{gas}}/V_{\text{air}}$

