

CIWMB
Landfill Gas Monitoring and Control Strategies at Developed Sites
Course Test

- 1) Landfill gas is a product of:
- a) Anaerobic decomposition of waste
 - b) Aerobic decomposition of waste
 - c) Alcoholic fermentation of waste
 - d) Volatization of waste
- 2) CIA is an acronym for:
- a) Central Intelligence Agency
 - b) Closed, Illegal & Abandoned
 - c) Closed, Inactive & Abandoned
 - d) Closed, Identified & Abandoned
- 3) Approximately how many CIA sites in California have been identified by the CIWMB?
- a) 500
 - b) 1,000
 - c) 1,750
 - d) 2,500
- 4) Approximately how many CIA sites in California have some form of development on or close to them?
- a) 500
 - b) 750
 - c) 1,000
 - d) 1,500
- 5) As generated, landfill gas consists primarily of:
- a) Methane & nitrogen
 - b) Methane & carbon dioxide
 - c) Methane & butane
 - d) Methane and oxygen
- 6) Landfill gas also contains:
- a) Volatile organic compounds
 - b) Water
 - c) Hydrogen sulfide
 - d) All of the above

- 7) Methane is:
- a) Odorless
 - b) Flammable & explosive
 - c) Colorless
 - d) All of the above
- 8) Landfill gas poses:
- a) Risk of suffocation
 - b) Risk of groundwater contamination
 - c) Risk of vegetation damage
 - d) All of the above
- 9) The total amount of landfill gas that will be produced from a landfill is governed by:
- a) The vigor of the microbes
 - b) The depth of the waste
 - c) The quantity of organic material in the landfill
 - d) The landfill moisture content
- 10) Production of landfill gas will continue until:
- a) All of the organic material in the landfill is consumed
 - b) All of the water in the landfill is consumed
 - c) 30 years after the landfill is closed
 - d) Forever
- 11) The rate of LFG production is governed by:
- a) Type of waste
 - b) Moisture content
 - c) pH
 - d) All of the above
- 12) Landfill gas movement is driven primarily by:
- a) Diffusion
 - b) Water vapor
 - c) Microbial respiration
 - d) Pressure
- 13) Landfill gas is:
- a) Odorless
 - b) A contributor to Global Climate Change
 - c) Lighter than air
 - d) All of the above

14) The CIWMB's landfill gas regulations focus primarily on:

- a) Monitoring & control of landfill gas migration
- b) Monitoring & control of air pollution from landfill gas
- c) Monitoring & control of landfill gas greenhouse gas emissions

15) LEL is an acronym for:

- a) Landfill environmental legislation
- b) Lower explosive limit
- c) Lower exposure limit
- d) Landfill excavation limit

16) Methane's LEL is:

- a) 50% in air
- b) 25% in air
- c) 15% in air
- d) 5% in air

17) Title 27 CCR requires that the concentration of methane at a landfill facility's property boundary not exceed:

- a) 1.25%
- b) 2.5%
- c) 5%

18) Title 27 CCR requires that the concentration of methane in an on-site structure not exceed:

- a) 10% of the LEL
- b) 15% of the LEL
- c) 25% of the LEL
- d) The LEL

19) The purpose of an LFG monitoring or migration control system is to:

- a) Protect human health and safety
- b) Protect the environment
- c) Achieve compliance with applicable regulations
- d) All of the above

20) The first step in designing a landfill gas monitoring system at a CIA site is to:

- a) Install probes all around the property boundary
- b) Determine the extent of waste and the source of gas
- c) Install monitoring devices in all on-site structures
- d) Conduct surface emission sweeps

21) Methods used to determine waste extent include:

- a) Dowsing
- b) Records research
- c) Using existing property boundaries
- d) Tarot cards

22) Long-term subsurface gas monitoring is best accomplished using:

- a) Bar-punch holes
- b) Seismometers
- c) Surface emission sweeps
- d) Probes

23) Long-term structure gas monitoring practices include:

- a) Probes
- b) Sweeps
- c) Continuous monitoring systems
- d) All of the above

24) Monitoring data should be analyzed:

- a) Annually
- b) Quarterly
- c) To justify collecting the data
- d) To look for pressure and concentration trends over time

25) Landfill gas control systems may include:

- a) Passive barrier systems
- b) Passive venting systems
- c) Positive pressure barrier systems
- d) Active interior wellfield extraction
- e) Active perimeter wellfield extraction
- f) All of the above