



Gas Detection in Landfills

Landfills can produce objectionable odors and toxic gases that move through soil and collect in nearby buildings. These gases produced include ammonia, sulfides, methane, carbon dioxide and other various gases.

Landfill gases are produced when bacteria break down organic waste. The amount of these gases present depends on the type of waste present, the age of the structure, the oxygen content, the amount of moisture and temperature.

While ammonia and hydrogen sulfide are primarily responsible for most odors, methane and carbon dioxide make up 90 to 98 percent of landfill gas. Methane is a combustible, flammable gas and concentrations can exceed explosive levels indoors. Like methane gas, carbon dioxide can collect in nearby buildings through windows, doors and ventilation systems and displace oxygen.

Short-term exposures to elevated levels of gases can cause coughing, irritation of the eyes, nose and throat, headache and nausea. Long-term exposure to high concentrations can cause more serious health effects, like breathing difficulties.

With proper gas detection equipment in place, levels of these gases can be monitored, and exposures can be reduced greatly to personnel. The data gathered by gas detection systems can offer insight into general air quality, gas migration, health hazards and conditions within the landfill itself.

Otis Instruments offers a variety of wired and WireFree easy-to-use, robust and configurable gas detectors capable of detecting both toxic and non-toxic gases for diverse applications within the landfill industry.

To learn more about our gas detection solutions for your industry, contact Otis Instruments today.