

Gas Detection in the Environmental Industry

In the environmental industry, ground gas existence and soil contamination can become hazardous for personnel and the environment.

Ground gas migration and emission from anthropogenic sources, like mine grouting, air blast rotary drilling, and blasting, heavily effect pathways and ground gas movements. Depending on the nature of the contamination or activities, various gases may be present, including methane (CH₄) and carbon dioxide (CO₂).

In addition to anthropogenic stressors, environmental factors, such as rapid changes in barometric pressure, can influence ground gas migration; other factors include porosity of soil, groundwater levels and temperature differentials.

Because CH₄ is highly flammable and CO₂ is an asphyxiant, it is important to locate the pathways of these gases to avoid ongoing health risks.

Soil contamination results from the rupture of storage tanks, application of pesticides, percolation of contaminated surface water, oil and fuel dumping, and the discharge of wastes from landfills. The most common chemicals involved include petroleum hydrocarbons, pesticides, solvents and lead.

Soil remediation is a way of purifying and revitalizing the soil by removing contaminants to protect both the population and the environment. The goal of this process is to restore the soil to its natural, pollution-free state. Cleanup or remediation of soil contaminants is analyzed and performed by workers within the environmental industry.

However, prior to soil remediation, properly surveying the soil's condition is vital to understanding the risks associated. During this process, gas detection equipment can help detect and monitor the present containment within the soil and the ground surrounding it.

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 environmental industry.

To learn more about our gas detection solutions for confined spaces, contact Otis Instruments today.