



Measurement & Analytics | Measurement made easy

# Mobile natural gas leak detection

## Find the leaks fast

# Fast, accurate, cost effective The better vehicle-based survey solution

Identify more leaks with higher reliability

Perform surveys fast – data can be reported while driving up to 55 mph

Distinguish between pipeline gas and other methane sources

Survey mains and services with one drive

Reduce cost, improve efficiency

Electronic data facilitates compliance reporting and creation of digitized workflow

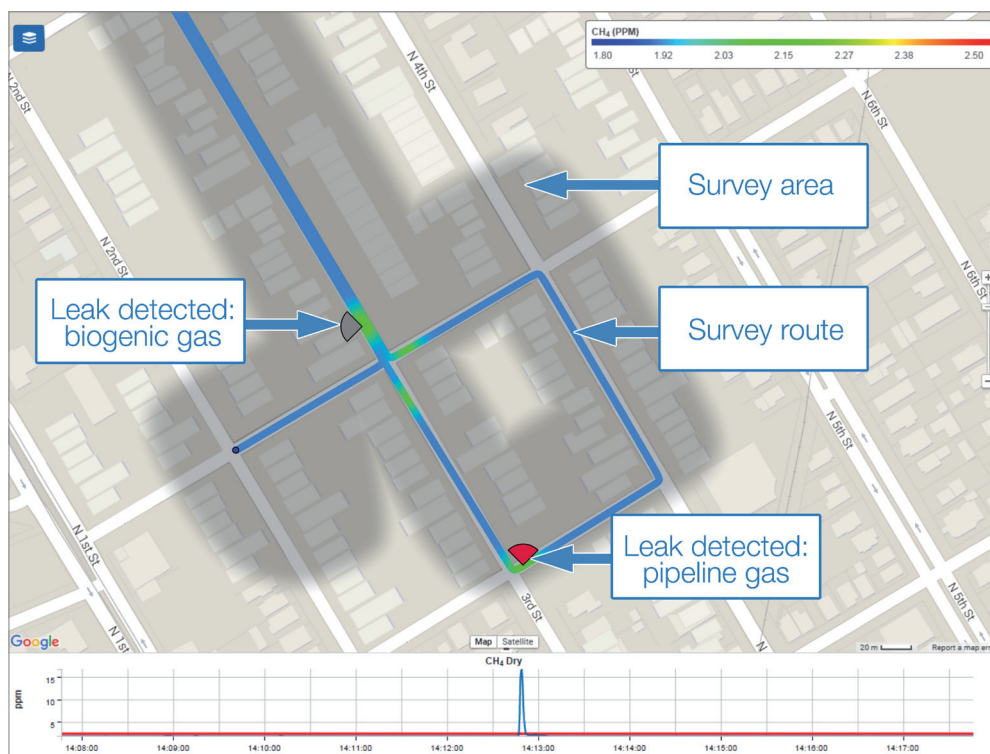
Did you know? A vehicle-based solution surveys 10-25x more area per hour than traditional methods

## Solve your leak detection challenges

Traditional leak detection processes do not meet today's demands for fast, accurate and transparent data. Utilities, as well as gas transmission and distribution companies, face increased challenges with pipeline monitoring and compliance due to:

- Aging infrastructure
- Regulatory pressure to improve system integrity
- Desire to reduce greenhouse gas emissions
- Reliance on time consuming, error-prone paper-based monitoring systems
- Pressure to reduce cost
- Need for data transparency

ABB's new Natural Gas Leak Detection System (MobileGuard) directly addresses all of these challenges using patented cavity-enhanced laser-based technology.



Screen capture from MobileGuard system showing leak detection

# Introducing ABB's MobileGuard Natural gas leak detection system

## The advantage of ABB's MobileGuard

The MobileGuard uses ABB's patented laser-based technique which is more than 1000 times more sensitive than older, less sensitive, legacy methods. This enables unambiguous identification of leaks several hundred feet away from the source.

- High reliability - Measures both methane & ethane to eliminate false positives
- Save time – Begin finding leaks within 2 minutes after power on (competitive laser methods either require 30-45 minutes to warm up or are far less sensitive)
- Less maintenance – Unlike other laser methods, ABB's patented technology is far more robust and can be fully serviced anytime, anywhere, by anyone.
- Lower operating cost - Customer owns the instrument and all data
- Transparent - Data available everywhere immediately through cloud-based reporting

## How it works

MobileGuard consists of ABB's LGR Methane/Ethane Analyzer, a GPS, a sonic anemometer and proprietary leak detection software that presents real-time geospatial maps of multiple gas concentrations in real time.

The software's sophisticated leak detection algorithm combines the system's measurements of gas concentrations ( $\text{CH}_4$ ,  $\text{C}_2\text{H}_6$ ), local coordinates (GPS) and local wind velocity (sonic anemometer) to estimate the location of the leak. This reduces the time necessary to pinpoint a leak, increasing safety and lowering emissions.

Readings are stored in the device and can be transmitted in real-time to the cloud for centralized monitoring.

Did you know? ABB's natural gas leak detection system is a single purchase - a much lower ownership cost than the lease-based solutions of other suppliers.



Off-Axis ICOS Analyzer  
(Methane/Ethane)



GPS  
(Location)



Sonic Anemometer  
(Wind Speed & Direction)



Computing  
(HMI/Leak Detection Software)

# Contacts

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