



Industry  
NATURAL GAS STORAGE

## CHALLENGE:

Customer operates an underground natural gas storage facility. Once a natural gas field, the facility was successfully converted into a storage reservoir through gas reinjection. The process of conversion also involves drilling many new wells that enables a more rapid withdrawal of gas from the reservoir storage. These wells are a source of methane gas leakages. Reducing methane emissions is a challenge for the oil & gas industry, as is compliance with emerging regulation. Moreover, increasing gas monitoring density in brownfield sites can be very costly due to signal and power conduit wire installation.

# Case Study: Methane Detection in Underground Natural Gas Storage



VANGUARD  
WIRELESSHART® FIXED  
POINT GAS DETECTOR

## SOLUTION:

A self-powered wireless methane detector enables more pervasive identification of leaks even in hard to access locations, at a fraction of the overall cost compared to wired detectors. The WirelessHART® Vanguard monitors methane emissions accurately for 5 years without battery replacement. With the help of optical imaging technology, Vanguard units were optimally positioned on wellheads to detect a controlled release of a methane plume with wind conditions. The Vanguard reliably detected the presence and absence of gas and transmitted the information to an Emerson WirelessHART gateway. It also accurately reported the concentration of the passing methane plume which was verified by the optical imaging cameras.



Deployed in days not  
months



Massive monetary  
savings



Flexible solution in a  
hard to access area