

Vanguard Remote Sensor: Monitoring Propane Leaks at Storage Terminal



VANGUARD WirelessHART
FIXED POINT GAS DETECTOR
WITH REMOTE SENSOR



Industry
GAS STORAGE

CHALLENGE:

An end user wants to use the Vanguard gas detector to monitor for propane leaks within their tank farms. Since propane gas is heavier than air, their propane sensors must be placed at the bottom of the berms surrounding their tanks. Once a month, due to the user's plant requirements, maintenance checks must be performed on the Vanguard gas detectors. They must send a worker down into each berm to check each unit. With approximately 50 tanks on-site and multiple gas detectors per tank, the end-user would have to climb down into each berm to check operation. Some berms are split into multiple sections and would require climbing in and out several times to check each Vanguard.

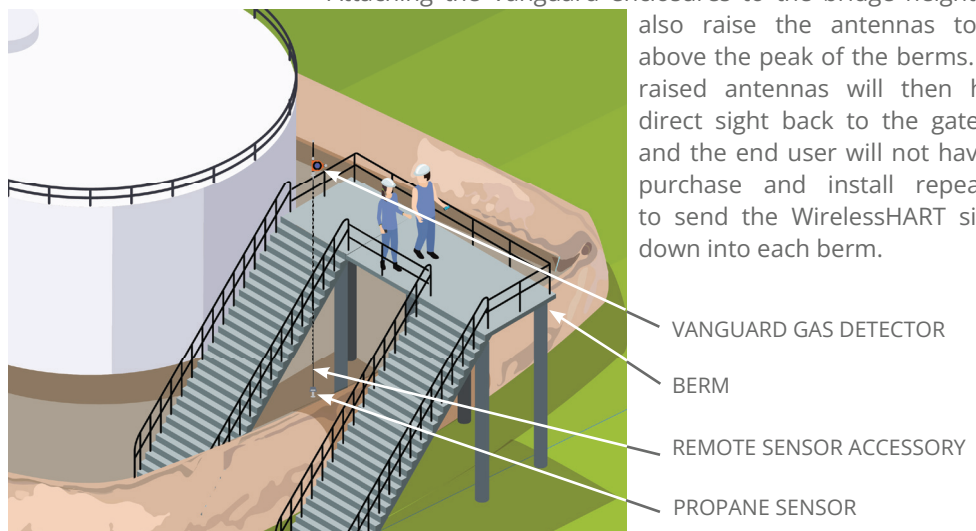
Another big issue with installing the gas detectors within the berm is the difficulty of sending a WirelessHART signal back to the gateway. When the gas detectors are close to ground level within the berm, they have no line-of-sight to their gateway. They would need to install numerous repeaters to send the signal back, which would also put a heavier load on their gateway. The heavier the load on the gateway, the slower response times they would see and the greater the chance of connectivity issues.

SOLUTION:

The end user will use the remote sensor accessory on the Vanguard to ease maintenance and to increase network reliability. The remote sensor accessory is an intrinsically safe cable that allows the Vanguard enclosure to be placed 9 ft away from the area where the leaks will be detected.

The end user will extend the sensor to the bottom of their berms and will install the Vanguard display at eye level next to the bridges crossing each berm. This will allow maintenance workers to check each Vanguard without lowering themselves into each berm. This will increase safety and speed of maintenance.

Attaching the Vanguard enclosures to the bridge height will also raise the antennas to be above the peak of the berms. The raised antennas will then have direct sight back to the gateway and the end user will not have to purchase and install repeaters to send the WirelessHART signal down into each berm.



Network Reliability



Flexibility of installation



Cost savings