



Remote Water Level Measurement with SignalFire RANGER and dBi HART Level Transmitters.

Grupo Mexico is the fourth largest company in Mexico and its mining division is one of the world’s top copper producers. In addition to sustainability initiatives, community development is a top priority for Grupo Mexico. This includes the implementation of public infrastructure for the communities where their employees reside. Grupo Mexico is committed to excellence and making intelligent investments in its employees, equipment, and technology. In the town of Esqueda, Mexico, where many employees in the Grupo Mexico mining division reside, Pulsar Measurement products were recently installed to better monitor water levels for the town’s water resources.

Monitoring Pump Station Status with the SignalFire Cloud Interface

Grupo Mexico positioned a SignalFire RANGER900 along with a network of 900 MHz nodes. Two pump stations are located 400 m away from the RANGER900. A2 Long Range Nodes with RSD (Remote Shutdown System) modules were installed to monitor the status of the pump stations. Located between 400 m and 2.6 km away are three water tanks each outfitted with a dBi HART transducer for level measurement. A built-in solar panel and rechargeable batteries power the dBi transducers, which take measurements at intervals configured by the user who can then access these measurements remotely via their cellphones and the SignalFire Cloud interface to get instant remote updates on water levels and pump status at any time. With this solution, only one RANGER and SIM Card subscription is needed to monitor both pump stations and three water tanks with dBi6 transducers. This solution reduces the customer’s overall cellular and monthly energy costs by integrating 900 MHz radios with the RANGER platform. The user also saves



Grupo Mexico were so pleased with the installation and accuracy of the products they commented, "To be able to see the levels remotely saves us a lot of time and resources".

time and money by being able to view how their measurement systems are operating without needing to send employees out to where the devices are installed.

In addition to monitoring your processes, the SignalFire RANGER can also control and/or have alarms set in order to mitigate potential problems. Grupo Mexico's next integration will be to use the RSD modules for remote pump control, as they have the ability to turn pumps on and off depending on level parameters set by the customer. There is even a safety feature that can be programmable to shut off pumps if at any time an antenna loses signal. Grupo Mexico has already found that more accurately monitoring the water levels of these tanks has eliminated overflows.

Solutions with Low Energy Consumption

The low-power design of the dBi HART level sensors is ideal for remote locations, as no other external power source is required. The non-contacting, ultrasonic level transducers can be used as stand-alone devices or as complete systems, using HART protocol for parametrization and sensor status. When paired with the SignalFire RANGER they have ultra-low power consumption.

SignalFire Wireless Telemetry RANGER and Pulsar Measurement products are a powerful combination for remote monitoring of flow, level, or volume. Customers can remotely access measurement data at any time they want via a laptop, PC, or mobile device. No need for expensive and complicated SCADA systems and PLC's.



More Information

Signal Fire RANGER and Pulsar Measurement dBi : <https://pulsarmeasurement.com/en/telemetry-solutions>

Partner Locator: <https://pulsarmeasurement.com/en/partnerlocator>



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