Case study
Remote monitoring

Environmental monitoring – ground water levels

Customer:

Banverket
The National Swedish Railways
www.banverket.se

Objective:
Monitoring of groundwater levels
Banverket is the Swedish authority responsible for the national railway system. The building of the tunnel through Hallandsåsen in south Sweden is one of the most complicated infrastructure projects currently being undertaken in Scandinavia. It has a widespread impact on many people in the local community. Due to the significant environmental consequences, all aspects of the project must be thoroughly monitored and documented.

Solution:
- Mitec battery-powered GSM measuring stations monitor ground water levels as well as pH.
- Banverket's servers collect data for export to database and Mitec's servers collect data for presentation on www.it-sensors.com
- Level alarms by SMS to supervisor.

Advantages:
- Robust environmentally-protected, battery-powered field measuring stations.
- Documentation for environmental quality system.
- Alarms if unexpected ground water leakage occurs.

Mitec measuring stations are small and can easy be located and moved as the project proceeds. Standard batteries power instruments and sensors.

Mitec patented drill hole measuring station

Products

Measuring station:	Battery powered Mitec SatelLite60-P2 GSM stations.
Communication:	GSM dual band 900/1800.
Power supply:	12V alkaline battery pack with 6-month durability. ISO14025 environmental decelerated.
Sensors:	Level sensors from Druck and Keller. Ph sensors from Sensorex.
Data acquisition:	Customer managed servers server.
Information distribution:	Automatic export to customers own data base and to public using Mitec Internet service www.it-sensors.com

Sat60-P2 GSM measuring station

Level and pH and sensors

MITEC INSTRUMENT AB Säffle Sweden
Phone + 46 533 16050 • Fax + 46 533 16045 • E-mail info@mitec.se • www.mitec.se
Member of Swedish Chamber of Commerce and Swedish Electronic Industry Association