

Application Note – Open Cut Mine Monitors Water Quality

Customer Requirements

An open cut coal mine having a high salinity of water runoff required monitoring the quality of water in several retaining dams. The water can only be released into the local river system when it is of sufficient quality to have no effect on the irrigation of the surrounding farming district.

Equipment

DT50
DeLogger™ 4 Pro
FreeWave Radio Modems
Solar Power with battery backup
Weatherproof Enclosures

Sensors

Water Quality Sensor
Conductivity Sensor (salinity)
Turbidity
PH
Water Temperature
Air Temperature
Water Level

Datataker Solution

Several sites were chosen for a number of monitoring installations. These installations are solar powered and connected by radio telemetry to a central PC in the mine office. The DeLogger™ 4 Pro software was installed on the PC and responsible for periodically setting up a telemetry connection to each of the *dataTaker*[®] data loggers in turn.

The DT50s were mounted in weatherproof enclosures, to measure and log data from the sensors. The voltage of the backup battery is also monitored and logged.

The system allows manual connection to each site at any time to observe the change in water quality during water management operations, such as mixing water from different sources.

At regular intervals the DeLogger Pro database is downloaded enabling archiving of long-term records of the water control system.

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