

Remote monitoring of critical variables, PLS
solutions well PH-05.
Minera Quebrada Blanca, Iquique - Chile.



Teck

Objective:

Remotely monitoring the evolution of the relevant variables in PLS capture process solutions in order to minimize the risk of infiltration of the solution into the pit.

Location:

Well PH-05, located on the west wall of the stage No. 5 pit, Minera Quebrada Blanca.



Secto well PH-05



Flowmeter

Variables to monitor:

1. PLS Flow solution (lt / sec).
2. Operation of generator (on / off).

Solution Architecture:

This solution consists of installing capture interface Wellford flowmeter analog signal and digital signal of operating generator located in PH-05.

These signals are encoded as data to be sent in real time to a device That transmits through the GSM / GPRS network (mobile phone network) to be captured and displayed on web site (access from computer) and time smartphone application (App).



Capture flowmeter readings.



Box with data transmission devices

In addition to the above, this solution is able to send alarms in real time, via ringtone, email and text message to designated recipients, whenever one or more sensors recorded readings that are outside of a certain range, thus enabling implementation of corrective actions in a very timely manner.

Taking readings of the flowmeter was made with 5 minute intervals between them.

Regarding alarms considered in this solution, these three types:

1. Alarm out parameter: When the reading is outside the configured security settings.
2. Reminder Alarm state. If the reading remains in the state of alarm, reminders are sent.
3. End of Alarm: When the reading returns within the parameters of safety.

Reports:

Weekly reports of behavior subject to monitoring variables are generated. They see information as:

1. Digital file (. xls) with database of readings during the period.
2. Executive Report (. pdf), where the following information is included for each variable:
 - Trend Graphs.
 - Maximum and minimum values registered.
 - Averages and deviations.
 - Time alarm state v / s total run time.
 - Probability Distributions.

Solution Benefits:

- Have real-time alerts, enabling take action in a timely manner.
- Avoid failures, processing delays, non-operating times, etc.. thus saving on operational costs.
- Availability of real-time critical variable.
- Availability of historical data to perform statistical analysis.
- Optimization of HH engaged in monitoring.
- Reduce significantly the risk of accidents associated with attendance monitoring.