



# Application Case Study

## Reading Through Dusty Materials

### The Application

Bentonite is a mineral used in many different industries as a bonding, suspending or gelling agent. It can be found in drilling mud, cast iron production, medical uses, personal hygiene products, cat litter (that's what makes it clump) and paper production. Bentonite is a fine, dusty material, about the consistency of sand. There is always a great deal of dust associated with this material and level measurement can be very difficult.

A paper mill in Canada uses bentonite to improve handling and processing of the product. The bentonite is stored in a 35-foot (10m) tall silo. The customer had been using a photocell product to measure the level. However, when the silo was in the process of filling or nearly empty, they lost level measurement due to the high amounts of dust. So, the customer went looking for a reliable solution to this problem.



### The Solution

The customer installed a U73/RCP in hopes of solving their bentonite measuring problems. The echOsonix offers low-frequency sound and a high-power sensing signal to ensure penetration through the dust. These features combine with adaptive programming to allow the unit to operate over a wide range of difficult conditions such as the dust in a bentonite silo.

### The Results

The U73/RCP was installed and set to read solids. At the time of installation, the silo was nearly empty and had been sitting long enough for all of the dust to settle. The photocell and the U73/RCP device was working fine in those conditions. The customer then brought in a load of bentonite and began filling the silo to test how well the echOsonix would really work. The U73/RCP never missed a beat - it read accurately all the way from empty to full, and has not lost track of the level since. The echOsonix solves another chronic level measuring problem with a lot of dust!



### Ordering Information

Electronics Model **U73-FL7J-ZZ-20**  
Remote 110VAC/24VDC Line-powered transmitter  
4 x SPDT Relays adjustable over entire range  
NEMA 4X Agency-listed remote electronics housing

Sensor Model **RCP-3A-ZZ-50**  
20 kHz Transducer for remote unit  
3" NPT Threaded connection  
Class A-G, Div. 2 Agency-listed transducer  
50-foot transducer cable