

## Monitoring MLSS, Sludge Blanket, RAS & FE Discharge of a Small Ww T Works

One of the attractive features of the WQM-16S unit is that it can be used to monitor a number of process parameters within a small Ww T Works.

This approach implements a **LOW COST MONITORING SYSTEM** as well as **reducing installation costs.**

The WQM-16S was installed in a small Works (a population of 70 houses) to monitor the MLSS and Temp., RAS, Blanket Interface and SS/Turbidity & Temp. in the final effluent discharge.



The SH2 MLSS probe was installed in a covered fine bubble aeration tank (see above photo). The probe is cleaned at regular intervals.

One of the SH2b probes was installed in the final settlement tank (see photo right) and at a specific depth to initiate desludging. The second SH2b probe was installed in the holding tank to monitor the RAS solids.



The SH1e probe monitors the SS/Turbidity & Temp. of the FE discharge (see photo left) after further UV treatment. The probe is cleaned at regular intervals.

All four parameters are continuously displayed on the local Dot Matrix LCD and also transmitted, via the four 4-20mA current outputs, to the SCADA system. This generate trends as well as initiating the desludging control sequence.



## MCS-2S Sludge Blanket Detection Units... Installed on a Fixed Bridge...

We undertake projects that can be labelled as "unusual installations..." and this is one such application...

Two MCS-2S blanket detection systems were installed on fixed bridges with rotating scrapers.. We modified our removable probe fixing kit to ensure that the probes were located at the correct location within the settlement tanks. When high blanket is detected, the detector will generate an alarm to open the desludging valve fully.

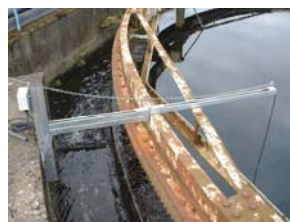


## MCS-16S Monitors the Sludge Blanket in Six Final Settlement Tanks

MCS-16S sludge interface detection unit was installed in a Ww T Works to detect the blanket in six final settlement tanks.

Six SH2b robust and waterproof probes were suitably located within the settlement tank to continuously monitor the sludge solids at that point. Once the solids exceeds the set solids threshold limit (e.g. SSth=2000 mg/l) the MCS-16S unit generate a HIGH alarm which in turn energises a high intensity flashing light to warn the operator of a failure. The SSth can be programmed by the user, to any value, via the 4x4 membrane keypad.

The solids data for each probe is continuously displayed on the local dot matrix display.



The operator cleans the probe at regular intervals to avoid false alarms. The zero, for each probe, is calibrated at 3/4 monthly intervals.

The calibration parameters are stored in a permanent memory... "when we have power failure... the system comes back as if nothing happened..." states the operator.

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The HIGH blanket alarms, from each unit, are transmitted via the Low power radio link located within the IP65 GRP enclosure and received at the control room (at a distance of 100m) to control the valves.

One of the attractive features of the MCS-2S unit is that it monitors as well as displays the sludge solids... providing the operator an indication concerning the sludge characteristics at that point... The operator has the added benefit of "checking the MLSS ... when the actual MLSS monitor is broken down...".

