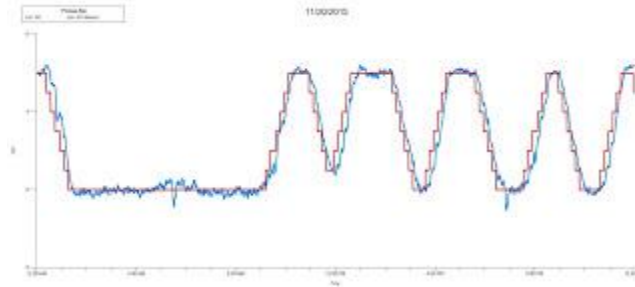


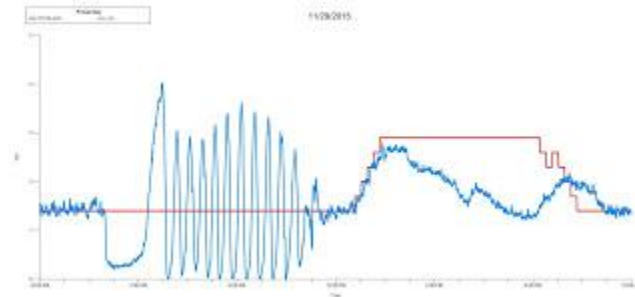
A picture is worth a thousand words...

Here is what good aeration control looks like. This plant (Lebanon, PA) uses dynamic DO setpoints, optimized for conditions as determined by our BIOS; and uses our patented BACS aeration control system to hit and maintain them. The DO setpoint is represented by the redline, while the actual DO concentration is shown in blue:



Note how tightly the actual DO concentration follows the setpoint, up and down, throughout the day. This level of control at this plant translated energy savings of nearly 50% while reducing TN to below 3mg/L.

By contrast, shown below are the typical results of a PID system (one of the better ones):



See how the actual DO concentration (blue) constantly over and undershoots, and rarely matches the targeted concentration? Those constant deviations, constant corrections, are wearing out the actuators, wasting energy, and compromising process effectiveness.

If the purpose of an aeration control system is to actually hit the aeration target, how much better is BACS than PID? The statistical variance that may be derived from the high and low points as measured over 4 hours for the PID systems shown above is 2.8. The same metric for the BioChem BACS over a similar 4 hours is .015. That's a ratio of 187 to 1! BACS is 187 times better!

It doesn't have to be this way! Get a BACS!

by Bill Mulligan