

Reduce Capex and Carbon Emissions with Hach's Phosphorus Real Time Control System

Historical plant performance need not reflect what is achievable with existing assets and advanced control.

Hach® understands the challenges that water companies and their partners face during the AMP7 period and beyond. The costs of achieving Water Industry National Environmental Programme (WINEP) compliance can be high and our aim is to assist water companies in reducing this cost. Investment in continuous monitoring solutions is a good way of avoiding the consequences of insufficient chemical phosphorus removal, negating adverse impacts, and safeguarding both the environment and protecting sources of water supply.

Hach's **Phosphorus Real Time Control system (RTC-P)** not only improves compliance for ever tighter phosphorus consents but can also reduce or negate the need for tertiary treatment at wastewater treatment works. By getting the dosing of coagulant under tighter control it can produce a baseline performance shift and greater understanding of the wastewater treatment process. The basic principle is that before considering investing in expensive tertiary treatment stages in terms of cost and carbon emissions, it makes fundamental sense to optimise your plant as a first step and assess what can be achieved with existing treatment processes.

Hach can offer a wide range of separate standardised combined options to ensure there is a proven approach to suit your plant. These include configurations such as 2 dose points being informed by one measurement point and automatic set point adjustment to compensate for solids loss events and increases in particulate phosphorus. Importantly, specialised feedback algorithms to allow very low ortho P set points to be met in real world conditions are also provided. Our extensive knowledge of instrumentation health allied to extensive control experience ensures we can also offer industry leading systems with fully integrated fall-back security.

Advantages of Our Solutions Include:

- The installation of a Hach RTC-P system before scoping and installing tertiary treatment stages, ensures that the existing processes are optimised for P removal.
- Additional capital expenditure can be substantially reduced or shown to be unnecessary in many cases.
- The provision of a step change in plant performance.
- Seamless integration with your existing control infrastructure.
- Auto compensation for chemical efficiency and solids loss events using total Phosphorus or suspended solids monitoring in the final effluent.
- The provision of automation for a polishing step, typically just upstream of the final settlement tanks.
- Ensuring that phosphorus requirements for biological treatment across the plant are respected and protected.
- Maintaining minimum stable phosphorus concentrations for biological requirements where applicable.
- Balancing phosphorus removal across the plant for chemical efficiency.
- Validated release to environment.
- Significantly outperforming permit levels to generate "regulatory headspace".



Hach – The Water Analysis Experts

www.uk.hach.com | info-uk@hach.com | Tel: (0)161 8721487



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