Press Release

ABB control system keeps ammonia levels in check

ABB's control and measurement equipment helps regulate effluent flows

Alpheus Environmental has recently installed ABB control and measurement equipment to regulate effluent flows into the receiving sewage treatment works at Basildon. The enhanced performance brought by the equipment has improved operations and will reduce future costs on site.

The company, based in Bedford, is a subsidiary of Anglian Water and specializes in the treatment of tankered liquid waste at its treatment works in Basildon. This waste is brought to the site by road tankers, treated and then discharged to a sewage treatment works which is operated by Anglian Water Services.

Two key parameters which Alpheus is required to regulate and monitor are the flow rate of the discharged treated effluent and its ammonia level.

Following discussions with ABB, a solution was devised that uses an ABB ControlMaster universal process controller together with an ABB MagMaster flow meter transmitter unit. This arrangement controls the speed of the outlet flow using an actuator valve.

The ABB ControlMaster also receives input from an ammonia analyser. If the level of ammonia leaving site is close to reaching the consented limit then the analyser signals the controller to shut down the site and close any outlet valves. It can also send e-mails to Alpheus and Anglian Water when levels are nearing the consented limit.

An ABB SM500 data recorder was fitted to oversee, record and report the data from this new control system. Daily reports are produced giving statistics on the volume and ammonia loading, which are sent straight to the Alpheus server. Data can be exported to produce Excel spread sheets and graphs.

Scott Grace, Operations Manager for Waste Management Recycling for Alpheus, says: "Previously, achieving the required flow rate and ammonia limit could be difficult, depending on the types of waste received on a particular day. Testing and monitoring was done manually and there was no easy way to electronically record results for future reference. Now we have instantaneous, live data sent from the site and recorded on our PCs for easy interrogation. This improvement has been extremely valuable to us for demonstrating compliance to our Regulators, optimising site operations and planning future improvements."

Scott Grace worked with ABB to adapt the system so that it could calculate the ammonia load and send the e-mails to relevant individuals.

Says Scott: "Throughout the project, Alan Hunt of ABB was very helpful and continued to advise us during installation. I have found ABB to be very quick in implementing solutions, they delivered on time and within budget – I couldn't have asked for a better service!"

For more information, email moreinstrumentation@gb.abb.com or call 0870 600 6122 ref. ‘Alpheus’.

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Caption: **ABB control system keeps ammonia levels in check**

Our pic ref: **CM.jpg**

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