Yorkshire Water

YorkshireWater

SUMMARY

Challenge
Identify opportunities to improve efficiency

Solution
Assessment of process and quality data

Results
Proactive maintenance, operational gains

Quality and security of supply are the key drivers for companies supplying drinking water.

Yorkshire Water provides very high quality water and class-leading customer service. They are forward-looking and willing to investigate and adopt new techniques that will enable them to maintain the high standards they have set themselves.

Perceptive Engineering were given an open brief to assess the performance of 4 water treatment plants, to determine what opportunities existed to raise quality, reduce costs and improve the service offered to their customers.

ADVANCED PROCESS CONTROL

The Perceptive Audit is a detailed investigation of the control schemes, operating procedures, data management, plant behaviour and operator performance, associated with any industrial or municipal process.

It begins with collection of anecdotal information about process behaviour, before using powerful data assessment tools to determine cause-and-effect relationships in all critical areas of the plant. Multivariate statistical analysis is coupled to comprehensive assessment of the existing control systems. A detailed written report is present that identifies the steps available for immediate benefit to the quality and cost of operation.

RESULTS

Each Audit identified a series of changes, from improved loop tuning to enhanced monitoring, all of which could be undertaken by Yorkshire's own maintenance teams. Correlation analysis identified the root cause of issues that would otherwise have taken longer to solve. Data visualisation helped to quickly pinpoint areas that could be controlled more tightly.

Yorkshire Water has decided to adopt the methodology and tools used in the Audit process, so that a rolling programme of continuous improvement across all their sites can be further enhanced. The aims are to reduce maintenance costs, reduce chemical use, maintain water quality and further improve on their already outstanding customer service.
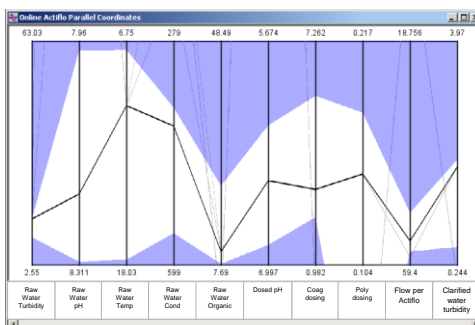
Data Visualisation
Advanced tools within the Perceptive software suite enable complex data sets to be easily and quickly visualised.
Parallel co-ordinates 'fingerprint' the normal operating envelope for the process, from multiple online data sources.

"The results from these reports highlighted the value that the Perceptive Audit is able to bring to Yorkshire Water. By adopting this methodology, we can quickly learn more about how our processes behave, and how to reduce our reactive maintenance costs."

Tony Appleton, Optimal Planning Engineer, Yorkshire Water Services