

## Plastics industry

### A water treatment case study

- Site system and process analysis
- Changes to chemical cycle and dosing
- Changes to reporting and monitoring
- Operational improvement
- Efficiencies and lower water use
- Enhanced compliance



#### Overview

This UK division of a US-based company is a world class manufacturer within the plastics industry. The 240,000 square metre manufacturing facility is a technically advanced injection moulding site offering custom injection and blow moulded components for multi-national FMCG clients in the personal care, household, food and beverage, healthcare and cosmetic markets.

#### Key issues

The UK site is subject to a continuous improvement regime which guarantees the highest levels of efficiency. The site is also expanding – with additional manufacturing equipment investment and evolving water treatment and cooling needs to keep pace with manufacturing.

The company's management enrolled on the 'Legionella Control for Everyone' course (WCS Group) and wanted to elevate and optimise water treatment systems and process control and drive efficiencies. They were looking for heightened compliance, reductions in water use and smarter testing and reporting regime, enabling greater understanding and better decision-making.

## WCS Group's approach

We began by creating a 'best practice' service programme including the cooling towers, domestic systems and chilled water systems. We reviewed every aspect of water treatment, process and system control and current performance KPIs to create a start-point and new, improved KPIs.

Biocide dosing was changed to correct inconsistent testing results and reduce site maintenance management time.

A 'smart' WebMaster dosing system was installed enabling full data collection and monitoring and chemical cycle change parameters. This improved system also compiles datalogs for conductivity and bromine levels and can raise email or SMS alarms if agreed targets are not met. The system can self-correct to pre-agreed adjustments.

System control was enhanced by the use of WebMaster and other improvements. Chemical and water usage is down and all information is readily interrogated and exportable in to the site Log Book. Installation costs were recouped in less than 18 months.

Corrosion monitoring has enabled fine adjustments to extend plant and equipment service life.

Set-up enhancements and service programmes to the water cooling towers have been adjusted to optimise operating results.

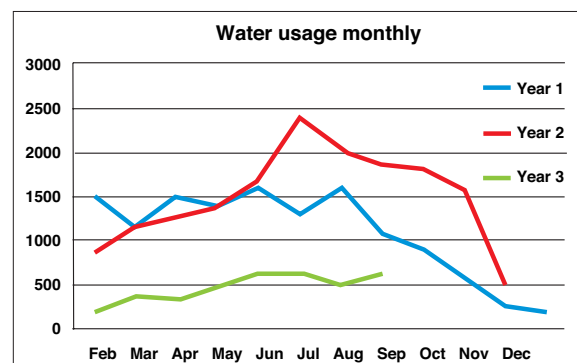
WCS Group conducts weekly visits, monthly checks and analysis and a six-monthly operational review to ensure that plant and equipment efficiency is maximised and site competitiveness is maintained.



## Outcome

Water usage is down significantly. The site's water and separate chilled cooling systems operate much more efficiently and seamlessly. Chemical use is down. Smart dosing and WebMaster monitoring has enabled the company to pursue and maintain far higher water systems and process KPIs. The service life of assets has been extended even though plant and equipment is now working harder. Site, maintenance and operating employees enjoy greater knowledge and benefit from proactive, technical WCS Group knowledge and best practice.

**"The changeover of water treatment service provider and improvement of the control programme was carried out with the minimum of disruption. Within three months we have had tighter control and cost savings. We continue to provide service of a very high standard. They have worked in partnership with us to deliver cost savings, site improvements and efficiencies."**



## A Marlowe Critical Services company

WCS Group is the 'Water Treatment and Hygiene' division of the Marlowe Critical Services Group owned by parent Marlowe plc.

Marlowe plc provides one access point for specialist 'highest standards' across;

**'Compliance & Facilities Software', 'Health and Safety Compliance', 'Retained HR, Employment Law & Health and Safety',  
'Occupational Health Services', 'eLearning and Training Services', 'Fire Safety & Security Services',  
'Water Treatment & Hygiene Services', 'Air and Ventilation Compliance', 'Asbestos Management Services'**

All nine divisions can be accessed singularly or in combination.

The Group shares many common customers and collectively employs 2,200+ specialists, servicing around 30,000 customers.

**Compliance. Assured.**

### WCS Group core services



#### WATER TREATMENT

Cooling Tower Systems  
Evaporative Condensers  
Steam Boilers  
Low and Medium Pressure Heating Systems  
Chilled Water Systems  
Pre-commission Cleaning  
Pre-Treatment Plant, Dosage, Chemical  
Cycle and Control  
Remote data logging  
Web-based electronic log book  
Swimming pools and Spas



#### WASTEWATER

Water Recycling  
Water and Wastewater equipment  
supply and service  
Wastewater Treatment plant design /  
supply / install  
Wastewater equipment hire  
Industrial Effluent monitoring and  
optimisation



#### WATER HYGIENE

Legionella Risk Assessment and  
Water Hygiene Surveys  
Monitoring / Inspection Contracts with  
Log Book Management  
Remote temperature monitoring  
Cleaning and Disinfectant Works  
Remedial Works  
Asbestos Risk Assessment



#### AIR HYGIENE

Air Hygiene Risk Assessment Survey  
Indoor Air Quality Monitoring  
Cleaning and Treatment of Air Handling  
Equipment



#### TRAINING SERVICES

eLearning  
Legionella Control Training  
WCS Group / IOSH / City & Guilds /  
COSH training  
On-site training for bespoke needs



#### WATER ENGINEERING

Design and specification for  
water treatment  
Installation  
Reverse Osmosis plant  
Cooling Tower maintenance  
Plumbing and remedial works  
Installation of water softeners  
Pre-treatment plant  
Closed system chemical cleaning  
Waste water management  
Re-purposing and harvesting of water



#### ASBESTOS

Asbestos Surveys  
Air Monitoring and 4 Stage Clearance  
Asbestos Bulk Sampling and Analysis  
Fire Risk Assessment  
CDM  
Principle Designer  
Construction Site Safety Audits  
Contractor Assessment

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