

C A S E S T U D Y

Food Production Facility Improves Energy and Water Efficiency (IL, IW) USA



OVERVIEW

The customer: An internationally renowned specialty food additives manufacturer with 12 production sites across the globe and sales of over 2 billion Euros. As part of its corporate environmental management system, the company is focused on implementing sustainable practices for water in both its manufacturing and utility operations.

The focus of **EnviroTower**[®] sustainable water treatment project was to reduce operating costs associated with three cooling tower systems at one of the company's facilities while protecting the critical asset from costly production downtime or premature replacement.

WATER SYSTEM CHALLENGES

Following a site assessment, comprehensive raw makeup water analysis and engineering assessment, an evaluation was performed to quantify the potential operational savings available by installing an **EnviroTower** solution.

SOLUTION

The first project completed in 2006 of the 700 Ton production operations cooling system. Based on the success of the first installation, the client has expanded their request to include a 1,260 Ton production cooling system and 1,370 Ton HVAC cooling system in 2011.

RESULTS

Implementation of the **EnviroTower** solution resulted in cost savings in four principal areas: water, energy, chemical and maintenance for a total of US\$100,000 annual operational savings and ROI <2 years.

- 12% water savings through higher cycles of concentration (3-4 pre-installation to 6.9 on average)
- 10% decrease in energy consumption by keeping heat exchange surfaces free from scale and improving heat transfer efficiency
- >92% reduction in chemical expenditures
- About 87% Annual Reduction in system cleaning and descaling costs

The savings resulted in a payback to the customer of less than 2 years. In addition, the system demonstrated good asset protection with strong corrosion and microbiological control. The customer's own assessment of the system deemed that the **EnviroTower** solution is beneficial to the operation of the facility, and the sustainability goals of the company. Further, the customer also stated that the **EnviroTower** solution is providing better overall performance results and water management capabilities than the incumbent chemical water treatment program. The organization is so pleased with the results from the first **EnviroTower** system that it has moved forward with implementing the same solution on other cooling tower operations in its plants in other states.

ABOUT THE TECHNOLOGY

The patented **ScaleBuster**[®] technology completely replaces traditional chemical treatment; providing control of scale and corrosion in various water process systems to create an exceptionally clean system. This dramatically reduces energy and water consumption, while reducing or, in certain cases, eliminating toxic water discharge to the environment.